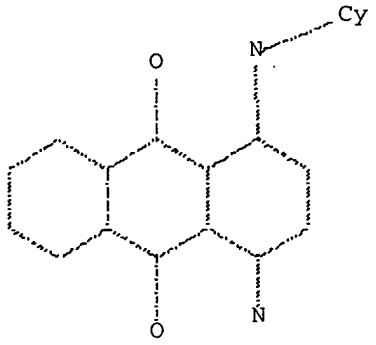
***** QUERY RESULTS *****

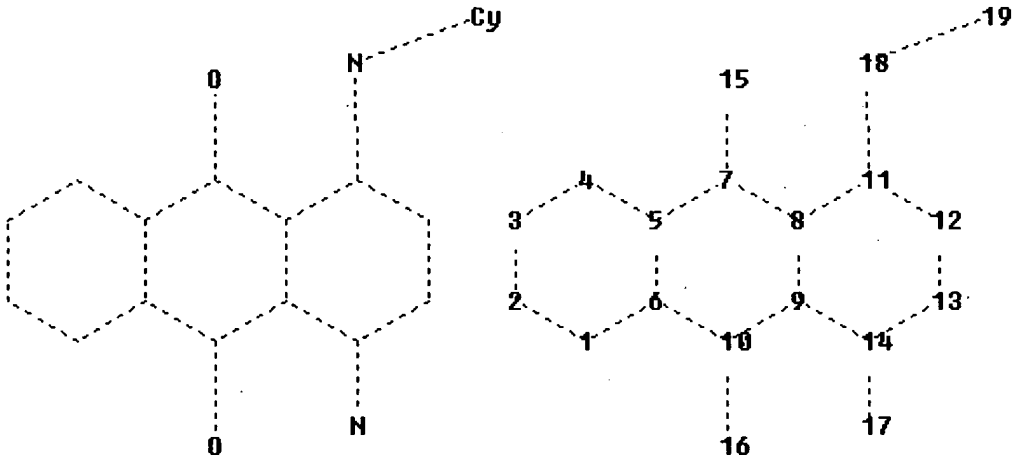
=> d stat que l14
L7 STR



SPECIES ELECTION SEARCH

Structure attributes must be viewed using STN Express query preparation:

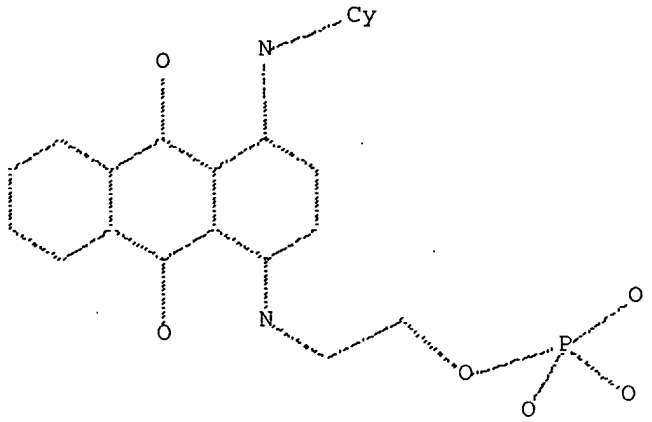
Uploading L3.str



chain nodes :
15 16 17 18 19
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
7-15 10-16 11-18 14-17 18-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 8-11 9-10 9-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 7-15 8-9 8-11 9-10 9-14 10-16 11-12 11-18 12-13 13-14 14-17 18-19

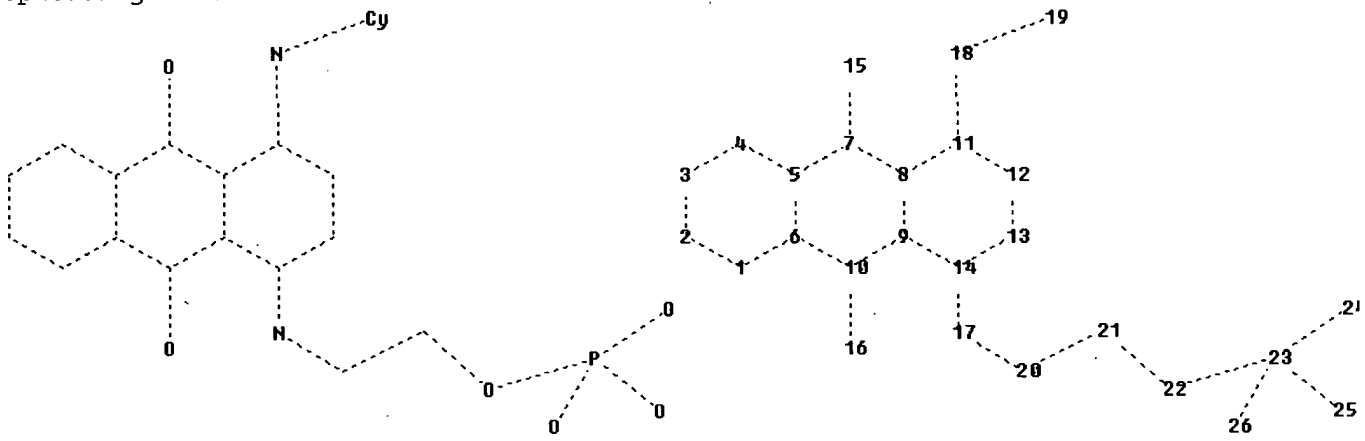
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:Atom

L9 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L4.str



chain nodes :
15 16 17 18 19 20 21 22 23 24 25 26
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
7-15 10-16 11-18 14-17 17-20 18-19 20-21 21-22 22-23 23-24 23-25 23-26

ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 8-11 9-10 9-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 7-15 8-9 8-11 9-10 9-14 10-16 11-12 11-18 12-13 13-14 14-17 17-20 18-19 20-21 21-22 22-23 23-24 23-25 23-26

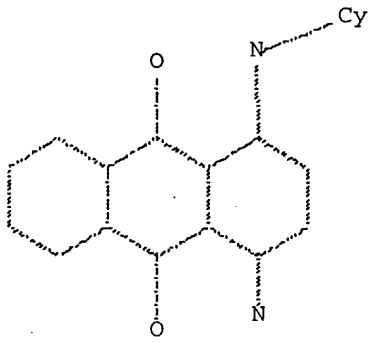
Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:Atom
20:CLASS 21:CLASS
22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS

L12 11523 SEA FILE=REGISTRY SSS FUL L7
L14 0 SEA FILE=REGISTRY SUB=L12 SSS FUL L9

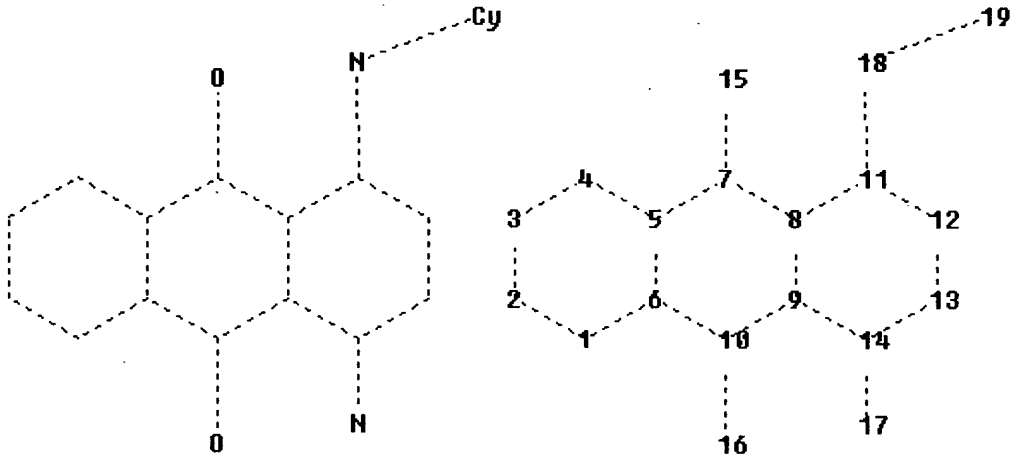
100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L22 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L3.str



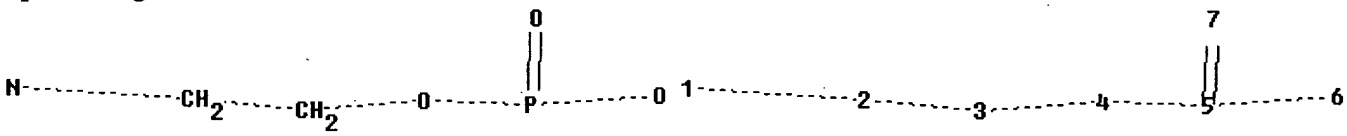
chain nodes :
15 16 17 18 19
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
7-15 10-16 11-18 14-17 18-19
ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 8-11 9-10 9-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 7-15 8-9 8-11 9-10 9-14 10-16 11-12 11-18 12-13 13-14 14-17 18-19

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:Atom

Structure attributes must be viewed using STN Express query preparation:

Uploading L7.str



chain nodes :
1 2 3 4 5 6 7
chain bonds :
1-2 2-3 3-4 4-5 5-6 5-7
exact/norm bonds :
1-2 2-3 3-4 4-5 5-6 5-7

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS

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    FILE 'REGISTRY' ENTERED AT 15:40:02 ON 31 OCT 2007
L7              STRUCTURE UPLOADED
                D
L8           50 SEA SSS SAM L7
L9              STRUCTURE UPLOADED
                D
L10           0 SEA SSS SAM L9
L11           0 SEA SUB=L8 SSS SAM L9
L12       11523 SEA SSS FUL L7
                D L9
L13           0 SEA SUB=L12 SSS SAM L9
L14           0 SEA SUB=L12 SSS FUL L9
L15             STRUCTURE UPLOADED
                D
L16         126 SEA SUB=L12 SSS FUL L15
L17             STRUCTURE UPLOADED
                D
L18          57 SEA SUB=L12 SSS FUL L17
L19        8628 SEA ABB=ON  PLU=ON  L12
L20           1 SEA ABB=ON  PLU=ON  L19 AND L1
                D IBIB HITSTR
L21             STRUCTURE UPLOADED
                D
L22          50 SEA SSS SAM L21
L23       22755 SEA SSS FUL L21
L24       43286 SEA ABB=ON  PLU=ON  L23
L25           3 SEA ABB=ON  PLU=ON  L19 (L) L24
                D SCAN
L26          12 SEA ABB=ON  PLU=ON  L19 AND L24

=> d 126 ibib ed abs hitind hitstr 1-12


L26  ANSWER 1 OF 12  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2005:1321229  HCAPLUS  Full-text
DOCUMENT NUMBER:         144:208262
TITLE:                   Lifetime fluorescence method for determining membrane
                         topology of proteins
AUTHOR(S):               Posokhov, Yevgen O.; Ladokhin, Alexey S.
CORPORATE SOURCE:        Department of Biochemistry and Molecular Biology,
                         Kansas University Medical Center, Kansas City, KS,
                         66160, USA
SOURCE:                  Analytical Biochemistry (2006), 348(1), 87-93
                         CODEN: ANBCA2; ISSN: 0003-2697
PUBLISHER:               Elsevier
DOCUMENT TYPE:           Journal
LANGUAGE:                English
ED   Entered STN:  20 Dec 2005
AB    Recently, the authors introduced a sensitive method for determining the
      bilayer topol. (cis- or trans-leaflet location) of single-site cysteine-linked
      7-nitrobenz-2-oxa-1,3-diazol-4-yl (NBD) fluorescent labels on membrane
      proteins [Ladokhin, A. S., et al. 2002]. It uses a novel quencher, LysoUB,
      composed of a single acyl chain attached to a UniBlue chromophore. In its
      original version, the method relied on the comparison of steady-state
      fluorescence measurements of membrane-inserted proteins in samples with
      different distributions of the LysoUB in cis- and trans-leaflets of the lipid
      bilayer. Here the authors modify the method to take advantage of the
      fluorescence lifetime methodol., which allows the authors to simplify sample
```

manipulation and, as a result, increase the reliability of topol. determination The authors tested the method using three model systems with artificially created all-cis, all-trans, and isotropic distribution of NBD. Because the quenching efficiency is higher when LysoUB and NBD are in the same leaflet, introduction of the quencher into the cis-leaflet results in a predictably different amount of quenching for these three model systems. Indeed, the addition of 2% LysoUB into the all-cis NBD model system causes strong reduction of the longest lifetime (from 8.1 to 4.9 ns), whereas the same addition of LysoUB results in marginal quenching (from 8.7 to 8.5 ns) in the case of all-trans NBD. This difference provides a good basis for topol. determination using time-resolved fluorescence quenching.

CC 9-5 (Biochemical Methods)

IT 173485-12-6D, proteins labeled with **313471-72-6** **478695-38-4**, LysoUB
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(lifetime fluorescence method for determining membrane topol. of proteins)

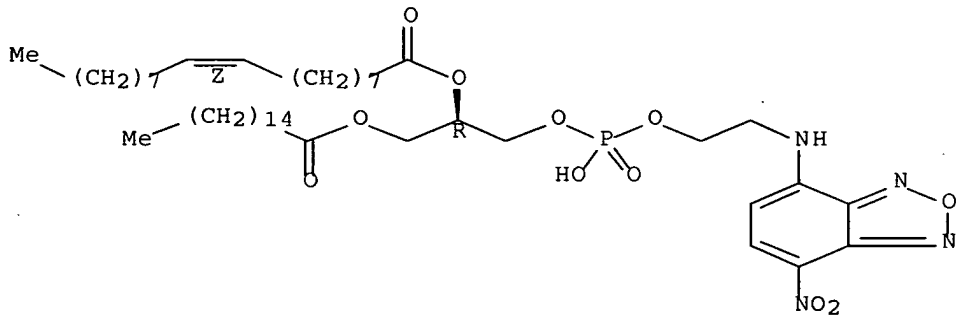
IT **26853-31-6**, POPC **53862-35-4** 81490-05-3, Palmitoyloleoylphosphatidylglycerol
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(membranes containing; lifetime fluorescence method for determining membrane
topol. of proteins)

IT **313471-72-6** **478695-38-4**, LysoUB
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(lifetime fluorescence method for determining membrane topol. of proteins)

RN 313471-72-6 HCAPLUS

CN 9-Octadecenoic acid (9Z)-, (1R)-1-[[[hydroxy[2-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]ethoxy]phosphinyl]oxy]methyl]-2-[(1-oxohexadecyl)oxy]ethyl ester (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

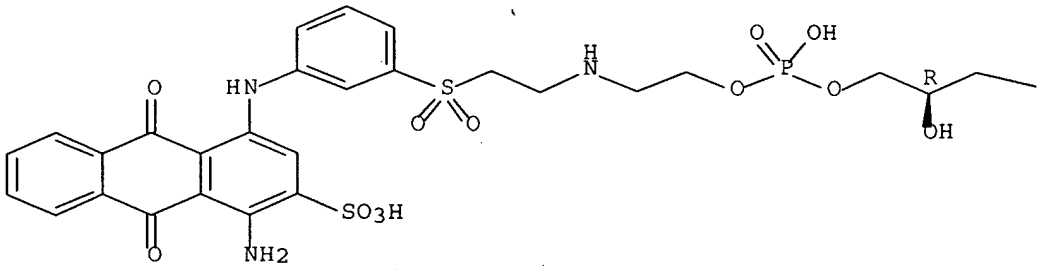


RN 478695-38-4 HCAPLUS

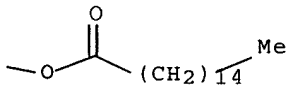
CN Hexadecanoic acid, (2R)-11-[[3-[(4-amino-9,10-dihydro-9,10-dioxo-3-sulfo-1-anthracenyl)amino]phenyl]sulfonyl]-2,5-dihydroxy-5-oxido-4,6-dioxa-9-aza-5-phosphaundec-1-yl ester (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

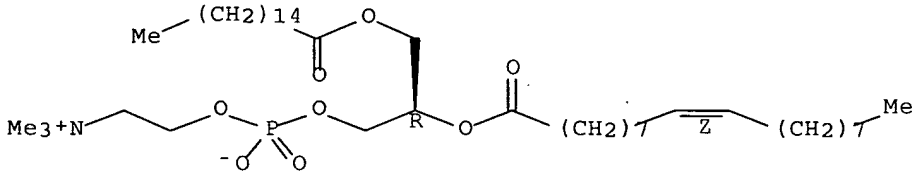


PAGE 1-B



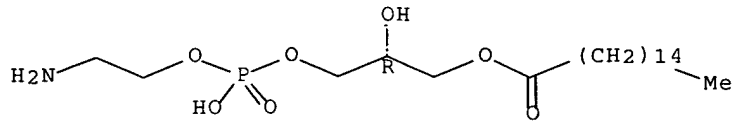
IT 26853-31-6, POPC 53862-35-4
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(membranes containing; lifetime fluorescence method for determining membrane
topol. of proteins)
RN 26853-31-6 HCAPLUS
CN 3,5,8-Trioxa-4-phosphahexacos-17-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[(1-oxohexadecyl)oxy]methyl]-, inner salt, 4-oxide, (7R,17Z)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



RN 53862-35-4 HCAPLUS
CN Hexadecanoic acid, (2R)-3-[[(2-aminoethoxy)hydroxyphosphinyl]oxy]-2-hydroxypropyl ester (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

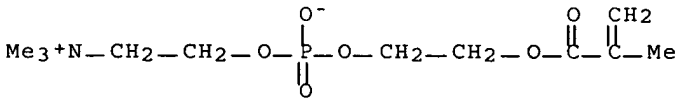
L26 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1291278 HCAPLUS Full-text
DOCUMENT NUMBER: 144:177289
TITLE: High functional hollow fiber membrane modified with phospholipid polymers for a liver assist bioreactor
AUTHOR(S): Ye, Sang Ho; Watanabe, Junji; Takai, Madoka; Iwasaki, Yasuhiko; Ishihara, Kazuhiko
CORPORATE SOURCE: Department of Materials Engineering, School of Engineering, The University of Tokyo, 7-3-1, Hongo, Bunkyo-ku, Tokyo, 113-8656, Japan
SOURCE: Biomaterials (2006), 27(9), 1955-1962
CODEN: BIMADU; ISSN: 0142-9612
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 09 Dec 2005
AB For practical application of a liver assist system with a tissue-conjugated hollow fiber membrane (HFM) bioreactor used in an extracorporeal therapy, it would require a highly sophisticated HFM which has both hemocompatibility on one side and cytocompatibility on the other side. In this study, the authors present a cellulose acetate (CA) HFM modified with 2-methacryloyloxyethyl phosphorylcholine (MPC) copolymers PMB30(MPC-co-n-Bu methacrylate) and PMA30 (MPC-co-methacrylic acid) for preparing a novel liver assist HFM bioreactor. A CA/PMB-PMA30 HFM modified asym. on the inner and outer surface with the PMB30 and PMA30 was prepared successfully. Anal. with an x-ray photoelectron spectroscope showed that the intensity of the phosphorus atom attributed to the MPC units on the outer surface of the modified HFM was stronger than that of the inner surface. The PMA30 was immobilized on the outer surface of the CA/PMB30 blend HFM by a chemical condensation reaction. The CA/PMB-PMA30 HFM showed good water and solute permeability in comparison with the CA HFM. The morphologies of the adherent hepatocytes were round in shape in comparison with the cells that adhered on CA HFM. Furthermore, hepatocytes cultured on the inner surface of the CA/PMB-PMA30 HFM showed higher functional expression in terms of urea synthesis and albumin synthesis than that of the CA HFM.
CC 63-7 (Pharmaceuticals)
IT **125275-25-4P**, Butyl methacrylate-2-methacryloyloxyethyl phosphorylcholine copolymer **150120-18-6P**, Methacrylic acid-2-methacryloyloxyethyl phosphorylcholine copolymer
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(blend with cellulose acetate; high functional hollow fiber membrane modified with phospholipid polymers for liver assist bioreactor)
IT 518-44-5, Fluorescin 9007-43-6, Cytochrome c, uses 60842-46-8, FITC-dextran **87915-38-6**, Blue-dextran
RL: NUU (Other use, unclassified); USES (Uses)
(high functional hollow fiber membrane modified with phospholipid polymers for liver assist bioreactor)
IT **125275-25-4P**, Butyl methacrylate-2-methacryloyloxyethyl

phosphorylcholine copolymer 150120-18-6P, Methacrylic acid-2-methacryloyloxyethyl phosphorylcholine copolymer
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(blend with cellulose acetate; high functional hollow fiber membrane modified with phospholipid polymers for liver assist bioreactor)

RN 125275-25-4 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (CA INDEX NAME)

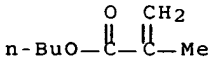
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

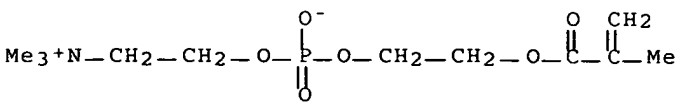
CRN 97-88-1
CMF C8 H14 O2



RN 150120-18-6 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-methyl-2-propenoic acid (CA INDEX NAME)

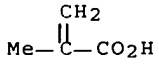
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 79-41-4
CMF C4 H6 O2



IT **87915-38-6**, Blue-dextran
RL: NUU (Other use, unclassified); USES (Uses)
(high functional hollow fiber membrane modified with phospholipid polymers for liver assist bioreactor)
RN 87915-38-6 HCAPLUS
CN Dextran, 4-[[4-[(4-amino-9,10-dihydro-9,10-dioxo-3-sulfo-1-anthracenyl)amino]-2-sulfophenyl]amino]-6-[[3(or 4)-sulfophenyl]amino]-1,3,5-triazin-2-yl ether, trisodium salt (CA INDEX NAME)

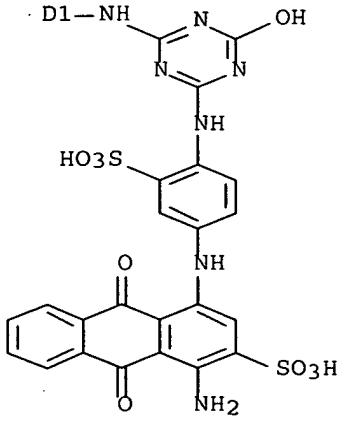
CM 1

CRN 168075-63-6
CMF C29 H21 N7 O12 S3
CCI IDS

PAGE 1-A

D1—SO3H

PAGE 2-A



CM 2

CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

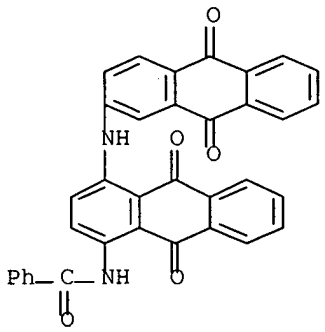
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1067393 HCAPLUS Full-text
DOCUMENT NUMBER: 143:372823
TITLE: Hair dyes containing vat dyes
INVENTOR(S): Javet, Manuela; Mueller, Catherine; Roulin, Anita
PATENT ASSIGNEE(S): Wella A.-G., Germany
SOURCE: Ger. Offen., 11 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 102004014764	A1	20051006	DE 2004-102004014764	20040326
WO 2005094762	A1	20051013	WO 2004-EP13305	20041124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1732508	A1	20061220	EP 2004-803242	20041124
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
BR 2004018672	A	20070605	BR 2004-18672	20041124
US 2007180630	A1	20070809	US 2006-590258	20060822
PRIORITY APPLN. INFO.:			DE 2004-102004014764A	20040326
			WO 2004-EP13305 W	20041124

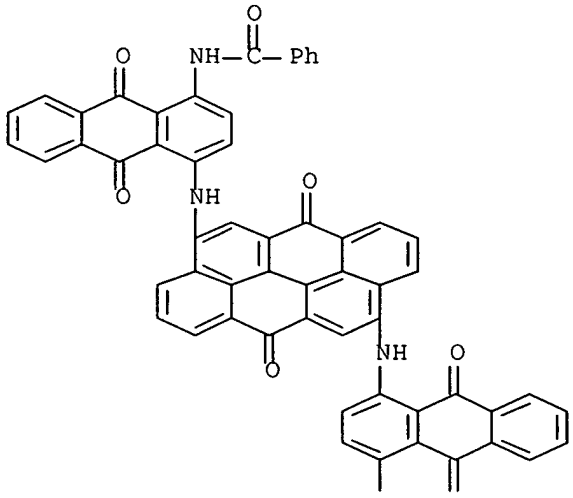
ED Entered STN: 06 Oct 2005
AB The invention concerns hair dyes containing vat dyes that are reduced by compds. that form endiols in alkaline media; the hair dyes are applied at pH 4-11. Further ingredients are cationic compds., developers, coupling agents, synthetic or natural direct dyes. The hair dyes contain the pre-reduced vat dyes in form of leuco vat dyes at pH 10-13; upon application the pH is set to 4-11; back-oxidation is carried out with oxygen from air or with an oxidation agent to form an insol. pigment. Thus a dye mixture contained (g): propylene glycol 10.0; C.I. Vat Yellow 46 1.0; sodium hydroxide (10% aqueous solution) 12.0; sodium chloride 3.0; acetoin 3.0; water 68.5. To the mixture 2.5 g lactic acid (90% aqueous solution) was added before application onto hair.
IC ICM A61K007-13

ICS C09B009-00
CC 62-3 (Essential Oils and Cosmetics)
IT 57-13-6, Urea, biological studies 81-77-6, C.I. Vat Blue 4 82-18-8, C.I. Vat Yellow 3 96-26-4, Dihydroxyacetone 108-78-1, Melamine, biological studies 116-09-6 116-71-2, C.I. Vat Blue 20 119-53-9, Benzoin 128-58-5, C.I. Vat Green 1 128-64-3, C.I. Vat Violet 10 128-66-5, C.I. Vat Yellow 4 128-70-1, C.I. Vat Orange 9 129-09-9, C.I. Vat Yellow 2 130-20-1, C.I. Vat Blue 6 131-92-0, C.I. Vat Brown 3 141-46-8, Glycolaldehyde 475-71-8, C.I. Vat Yellow 1 513-86-0, Acetoin 533-60-8, Adipoin 636-38-4 1324-02-3, C.I. Vat Orange 19 1324-11-4, C.I. Vat Orange 1 1324-35-2, C.I. Vat Orange 2 1324-55-6, C.I. Vat Violet 1 1327-79-3, C.I. Vat Blue 43 1328-19-4, C.I. Vat Black 16 1328-41-2, C.I. Vat Green 11 1328-50-3, C.I. Vat Blue 29 2172-33-0, C.I. Vat Orange 11 2379-77-3, C.I. Vat Red 32 2379-78-4, C.I. Vat Orange 15 2379-79-5, C.I. Vat Red 10 2379-81-9, C.I. Vat Black 27 2475-33-4, C.I. Vat Brown 1 3271-76-9, C.I. Vat Green 3 3627-47-2, C.I. Vat Yellow 26 3737-76-6, C.I. Vat Red 35 **4003-36-5**, C.I. Vat Violet 16 4203-77-4, C.I. Vat Red 13 4216-01-7, C.I. Vat Yellow 20 4216-02-8, C.I. Vat Red 15 4229-15-6, C.I. Vat Yellow 28 4378-61-4, C.I. Vat Orange 3 4395-53-3, C.I. Vat Black 25 4424-06-0, C.I. Vat Orange 7 4430-55-1, C.I. Vat Blue 26 5521-31-3, C.I. Vat Red 23 **6049-19-0**, C.I. Vat Black 29 6219-97-2, C.I. Vat Blue 21 6247-39-8, C.I. Vat Blue 25 6369-65-9, C.I. Vat Green 9 6370-58-7, C.I. Vat Violet 15 6370-75-8, C.I. Vat Yellow 12 6370-77-0, C.I. Vat Orange 17 6370-78-1, C.I. Vat Yellow 17 6370-82-7, C.I. Vat Red 28 6417-50-1, C.I. Vat Yellow 13 6424-51-7, C.I. Vat Brown 45 6492-78-0, C.I. Vat Blue 30 7722-84-1, Hydrogen peroxide, biological studies 8005-56-9, C.I. Vat Red 14 12227-50-8, C.I. Vat Yellow 33 12237-50-2, C.I. Vat Yellow 46 13390-49-3, C.I. Vat Green 12 13840-56-7, Sodium borate 15935-52-1, C.I. Vat Blue 64 25136-75-8, Polyquaternium-39 26006-22-4, Polyquaternium-5 26062-79-3, Polyquaternium-6 26161-33-1, Polyquaternium-37 26590-05-6, Polyquaternium-7 35429-19-7, Polyquaternium-15 53633-54-8, Polyquaternium-11 53694-17-0, Polyquaternium-22 57456-24-3, C.I. Vat Blue 66 60494-40-8, Polyquaternium-36 63451-27-4, Polyquaternium-2 65497-29-2 71329-50-5 81859-24-7, Polyquaternium-10 92183-41-0, Polyquaternium-4 95144-24-4, Polyquaternium-16 98616-25-2, Polyquaternium-24 110736-85-1, Polyquaternium 19 110736-86-2, Polyquaternium 20 113784-58-0, Polyquaternium-18 **125275-25-4**, Polyquaternium-51 131954-48-8, Polyquaternium-28 132977-85-6, Polyquaternium-27 148506-50-7, Polyquaternium-17 148880-30-2, Polyquaternium 29 150599-70-5, Polyquaternium-44 174761-16-1, Polyquaternium-46 189767-67-7, Polyquaternium 31 189767-69-9, Polyquaternium 35 197969-51-0, Polyquaternium-47 306769-73-3, Polyquaternium-55 696602-27-4, Polyquaternium 57
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye with vat dyes)
IT **4003-36-5**, C.I. Vat Violet 16 **6049-19-0**, C.I. Vat Black 29 **125275-25-4**, Polyquaternium-51
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye with vat dyes)
RN 4003-36-5 HCAPLUS
CN Benzamide, N-[4-[(9,10-dihydro-9,10-dioxo-2-anthracenyl)amino]-9,10-dihydro-9,10-dioxo-1-anthracenyl]- (9CI) (CA INDEX NAME)

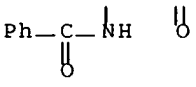


RN 6049-19-0 HCAPLUS
CN Benzamide, N,N'-[(6,12-dihydro-6,12-dioxodibenzo[def,mno]chrysene-4,10-diyl)bis[imino(9,10-dihydro-9,10-dioxo-4,1-anthracenediyl)]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



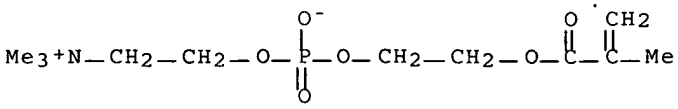
PAGE 2-A



RN 125275-25-4 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (CA INDEX NAME)

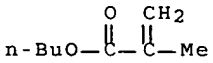
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 97-88-1
CMF C8 H14 O2



L26 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:735314 HCAPLUS Full-text
DOCUMENT NUMBER: 143:166700
TITLE: Uridine administration for stimulation of brain and neural cell membrane production
INVENTOR(S): Watkins, Carol; Wurtman, Richard J.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S. Ser. No. 941,025.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005176676	A1	20050811	US 2004-972777	20041026
US 2002028787	A1	20020307	US 1999-363748	19990730
US 6989376	B2	20060124		
US 2005203053	A1	20050915	US 2004-941025	20040915
AU 2005285090	A1	20060323	AU 2005-285090	20050913
CA 2579851	A1	20060323	CA 2005-2579851	20050913
WO 2006031683	A2	20060323	WO 2005-US32312	20050913
WO 2006031683	A3	20061221		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,

ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

US 2006069061	A1	20060330	US 2005-224311	20050913
EP 1802314	A2	20070704	EP 2005-796529	20050913
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US 2006241077	A1	20061026	US 2006-341912	20060130
US 2007004670	A1	20070104	US 2006-510737	20060828

PRIORITY APPLN. INFO.:

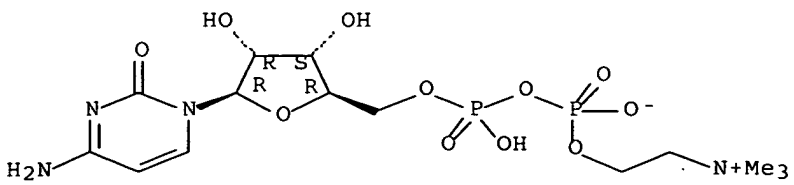
US 1998-95002P	P	19980731
US 1999-363748	A2	19990730
US 2004-941025	A2	20040915
US 2004-944269	A	20040920
US 2004-972777	A	20041026
US 2005-224311	A2	20050913
WO 2005-US32312	W	20050913
US 2006-341912	A2	20060130

ED Entered STN: 12 Aug 2005

AB The invention provides methods for stimulating or enhancing production of a cellular membrane, improving a cognitive function or a neurol. function, treating or ameliorating a decline in a cognitive function or a neurol. function, increasing cytidine levels, or treating a neurol. disorder in a subject, comprising administering a uridine, a uridine precursor, or a derivative or metabolite thereof to the subject. The invention also provides methods of improving neural function, comprising contacting the neuron with a uridine, a uridine precursor, or a derivative or metabolite thereof.

IC ICM A61K031-7072
ICS A61K031-513
INCL 514049000; 514269000
CC 1-11 (Pharmacology)
IT 51-61-6, Dopamine, biological studies 51-84-3, Acetylcholine, biological studies 102-32-9, Dopac 145-63-1, Suramin 306-08-1, Homovanillic acid **987-78-0**, CDP-choline 9061-61-4, Nerve growth factor **12236-82-7**, Reactive blue 2 68247-19-8, Inositol phosphate 149017-66-3, PPADS
RL: BSU (Biological study, unclassified); BIOL (Biological study) (uridine compound for stimulation of brain and neural cell membrane production)
IT **987-78-0**, CDP-choline **12236-82-7**, Reactive blue 2
RL: BSU (Biological study, unclassified); BIOL (Biological study) (uridine compound for stimulation of brain and neural cell membrane production)
RN 987-78-0 HCAPLUS
CN Cytidine 5'-(trihydrogen diphosphate), P'-[2-(trimethylammonio)ethyl] ester, inner salt (CA INDEX NAME)

Absolute stereochemistry.



RN 12236-82-7 HCAPLUS
CN 2-Anthracenesulfonic acid, 1-amino-4-[[4-[[4-chloro-6-[[3(or 4)-sulfophenyl]amino]-1,3,5-triazin-2-yl]amino]-3-sulfophenyl]amino]-9,10-dihydro-9,10-dioxo- (CA INDEX NAME)

PAGE 1-A

D1—SO_3H

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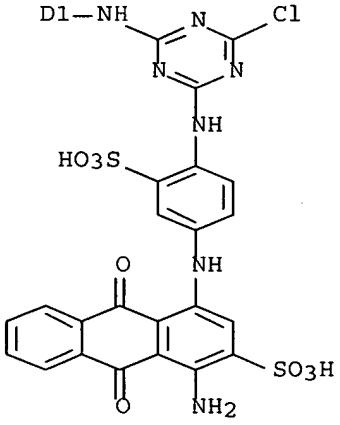


L26 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:492833 HCAPLUS Full-text
DOCUMENT NUMBER: 143:22619
TITLE: Biosubstance separation gel membrane, and separation method using gel membrane
INVENTOR(S): Ishihara, Kazuhiko; Watanabe, Junji; Katagiri, Hiroshi
PATENT ASSIGNEE(S): Daiichi Kigyou Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005147838	A	20050609	JP 2003-385448	20031114

PRIORITY APPLN. INFO.: JP 2003-385448 20031114
ED Entered STN: 10 Jun 2005
AB A biosubstance separation gel membrane is provided, which is characterized in that it is constituted by containing a polymer possessing a constituting unit derived from 2-methacryloyloxyethylphosphorylcholine, and it is used for separating a biosubstance. Also provided is a biosubstance separation method, which is characterized in that a biosubstance is separated by introducing a sample containing the biosubstance to a container equipped with the above-mentioned separation gel membrane and applying a pressure. By this method, even a minute sample containing a biosubstance, especially a sample containing a protein, is efficiently separated without causing its adsorption or denaturation. Also by this method, blood cells and blood plasma are conveniently separated from whole blood without causing destruction, adsorption or denaturation on blood cell components.
IC ICM G01N001-10
ICS B01D069-02; B01D069-10; B01D071-06; G01N033-48
CC 9-9 (Biochemical Methods)
IT 477-73-6, Safranine **87915-38-6**, Blue dextran
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(biosubstance separation method using gel membrane)
IT 109-16-0, Triethylene glycol dimethacrylate 26570-48-9, Polyethyleneglycoldiacrylate **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(biosubstance separation method using gel membrane)
IT **87915-38-6**, Blue dextran
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(biosubstance separation method using gel membrane)
RN 87915-38-6 HCAPLUS
CN Dextran, 4-[[4-[(4-amino-9,10-dihydro-9,10-dioxo-3-sulfo-1-anthracenyl)amino]-2-sulfophenyl]amino]-6-[[3(or 4)-sulfophenyl]amino]-1,3,5-triazin-2-yl ether, trisodium salt (CA INDEX NAME)

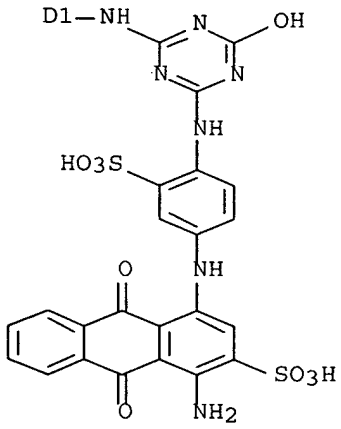
CM 1

CRN 168075-63-6
CMF C29 H21 N7 O12 S3
CCI IDS

PAGE 1-A

D1—SO_3H

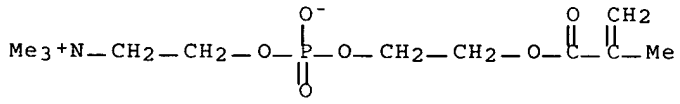
PAGE 2-A



CM 2

CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(biosubstance separation method using gel membrane)
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (CA INDEX NAME)



L26 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:815374 HCAPLUS Full-text
DOCUMENT NUMBER: 138:35566
TITLE: Determining the Membrane Topology of Proteins: Insertion Pathway of a Transmembrane Helix of Annexin 12
AUTHOR(S): Ladokhin, Alexey S.; Isas, J. Mario; Haigler, Harry T.; White, Stephen H.
CORPORATE SOURCE: Department of Physiology and Biophysics, University of California, Irvine, CA, 92697-4560, USA
SOURCE: Biochemistry (2002), 41(46), 13617-13626
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

ED Entered STN: 27 Oct 2002

AB We describe a sensitive method for determining the bilayer topol. of single-site cysteine-linked NBD fluorescent labels on membrane proteins. Based upon a method developed for peptides [W. C. Wimley and S.H. White (2000) Biochem. 39, 161-170], it utilizes a novel fluorescence quencher, lysoUB, comprised of a single acyl chain attached to a UniBlue chromophore. The enhanced sensitivity of the method arises from the brightness of the NBD fluorescence and the quenching efficiency of lysoUB, which is not fluorescent. In the course of validating the method, we examined the insertion topol. of the D-E helical region of repeat 2 of annexin 12, known to adopt a transbilayer orientation at mildly acidic pH [Langen et al.(1998) Proc. Natl. Acad. Sci. USA 95, 14060-14065]. In the final membrane-inserted state, an NBD label attached to the single-cysteine mutant D134C was found to be in the outer (cis) leaflet, while the one attached to D162C was found in the trans leaflet. But kinetic measurements of NBD fluorescence suggested the existence of a transient intermediate insertion state whose lifetime could be increased by increasing the fraction of anionic lipids in the vesicles. Indeed, the lifetime could be increased for times sufficient for the completion of lysoUB-NBD topol. measurements. Such measurements revealed that the D-E region adopts an interfacial topol. in the intermediate state with both ends on the cis side of the membrane, consistent with the general concept of interface-directed membrane insertion of proteins.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6

IT **26662-91-9**, Palmitoyloleoylphosphatidylcholine 81490-05-3, 1-Palmitoyl-2-oleoyl phosphatidylglycerol
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect of membrane composition on method for determining the bilayer topol. of single-site cysteine-linked NBD fluorescent labels on membrane proteins)

IT **178119-00-1**, NBD-PE
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(method for determining the bilayer topol. of single-site cysteine-linked NBD fluorescent labels on membrane proteins)

IT **478695-38-4P**
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(synthesis of LysoUB fluorescence quencher for determining the bilayer topol. of single-site cysteine-linked NBD fluorescent labels on membrane proteins)

IT **34293-80-6 53862-35-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of LysoUB fluorescence quencher for determining the bilayer topol. of single-site cysteine-linked NBD fluorescent labels on membrane proteins)

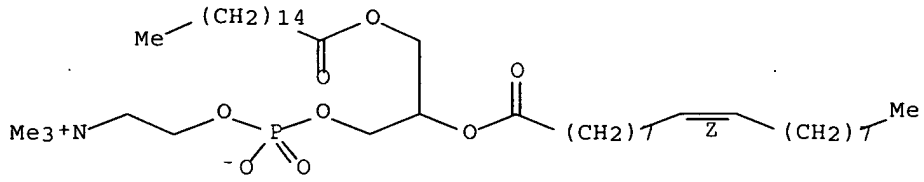
IT **26662-91-9**, Palmitoyloleoylphosphatidylcholine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect of membrane composition on method for determining the bilayer topol. of single-site cysteine-linked NBD fluorescent labels on membrane proteins)

RN 26662-91-9 HCAPLUS

CN 3,5,8-Trioxa-4-phosphahexacos-17-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[(1-oxohexadecyl)oxy]methyl]-, inner salt, 4-oxide, (17Z)- (CA

INDEX NAME)

Double bond geometry as shown.

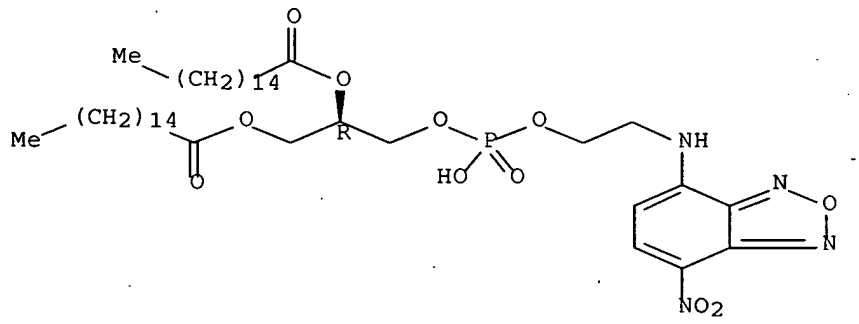


IT 178119-00-1, NBD-PE
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(method for determining the bilayer topol. of single-site cysteine-linked NBD
fluorescent labels on membrane proteins)
RN 178119-00-1 HCAPLUS
CN Hexadecanoic acid, (1R)-1-[[[hydroxy[2-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]ethoxy]phosphinyl]oxy]methyl]-1,2-ethanediyl ester, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

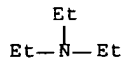
CRN 92605-64-6
CMF C43 H75 N4 O11 P

Absolute stereochemistry.



CM 2

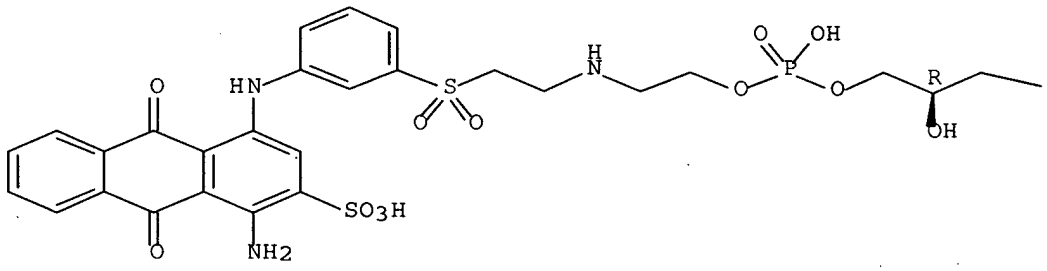
CRN 121-44-8
CMF C6 H15 N



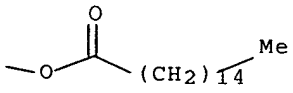
IT **478695-38-4P**
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(synthesis of LysoUB fluorescence quencher for determining the bilayer topol.
of single-site cysteine-linked NBD fluorescent labels on membrane proteins)
RN 478695-38-4 HCAPLUS
CN Hexadecanoic acid, (2R)-11-[[3-[(4-amino-9,10-dihydro-9,10-dioxo-3-sulfo-1-anthracenyl)amino]phenyl]sulfonyl]-2,5-dihydroxy-5-oxido-4,6-dioxa-9-aza-5-phosphaundec-1-yl ester (CA INDEX NAME)

Absolute stereochemistry.

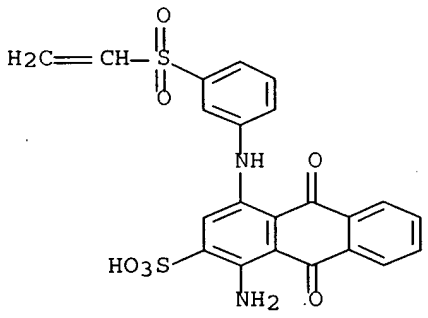
PAGE 1-A



PAGE 1-B

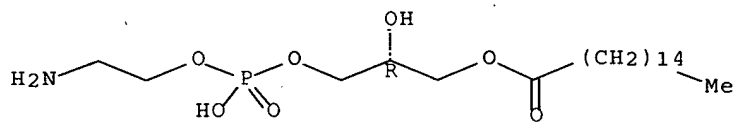


IT **34293-80-6 53862-35-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of LysoUB fluorescence quencher for determining the bilayer topol.
of single-site cysteine-linked NBD fluorescent labels on membrane proteins)
RN 34293-80-6 HCAPLUS
CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-(ethenylsulfonyl)phenyl]amino]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)



RN 53862-35-4 HCAPLUS
CN Hexadecanoic acid, (2R)-3-[[(2-aminoethoxy)hydroxyphosphinyl]oxy]-2-hydroxypropyl ester (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:637548 HCAPLUS Full-text
DOCUMENT NUMBER: 137:190734
TITLE: Formulations containing monoglycerides for enhancement of drug bioavailability
INVENTOR(S): Jeong, Seo-young; Kwon, Ick-chan; Chung, Hesson
PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002064166	A1	20020822	WO 2002-KR206	20020208
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2002066778	A	20020821	KR 2001-7125	20010213
AU 2002233777	A1	20020828	AU 2002-233777	20020208

PRIORITY APPLN. INFO.: KR 2001-7125 A 20010213
WO 2002-KR206 W 20020208

ED Entered STN: 23 Aug 2002

AB The present invention relates to compns. and formulations to enhance bioavailability of bioactive materials and preparation method thereof. More particularly, the present invention relates to a composition comprising at least one monoglyceride, at least one emulsifier, organic solvents and aqueous solution and a liquid and powder formulation prepared by adding bioactive material with a low bioavailability to enhance bioavailability of bioactive materials and to acquire high encapsulation efficiency of the bioactive material and high storage stability for a long period of time and preparation method thereof. For example, a liquid formulation containing tetanus toxoid was prepared In 120 μL of ethanol, 20 mg Pluronic F-68 was dissolved (under heating if necessary). After mixing 40 μL of the 5.376 mg/mL tetanus toxoid aqueous solution and 280 mg of propylene glycol, 100 mg of monoolein and the above Pluronic F-68/ethanol solution was added to the mixture of tetanus toxoid and propylene glycol and stirred to prepare a homogeneous liquid solution Ethanol in the formulation was evaporated completely by purging with oxygen-free nitrogen gas to prepare the viscous liquid formulation. The formulation was dispersed well in water, and the average particle size and polydispersity of the dispersion of the liquid formulation were 303.9 nm and 0.185, resp., in water and 175.2 nm and 0.377, resp., in 0.01 M sodium deoxycholate. The encapsulation efficiency of tetanus toxoid was 80-85%.

IC ICM A61K047-44

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

IT 81-25-4, Cholic acid 83-44-3, Deoxycholic acid 128-13-2, Ursodeoxycholic acid 151-21-3, Sodium dodecyl sulfate, biological studies 434-13-9, Lithocholic acid 474-25-9, Chenodeoxycholic acid 3700-67-2, Dimethyldioctadecylammonium bromide 9005-63-4, Polyoxyethylene sorbitan 104162-48-3, DOTMA 106392-12-5, Poloxamer 137056-72-5, DC-Chol 144189-73-1, DOTAP **183283-20-7**, DOEPC
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(emulsifier; formulations containing monoglycerides for enhancement of drug bioavailability)

IT 50-56-6, Oxytocin, biological studies 57-55-6, Propylene glycol, biological studies 57-83-0, Progesterone, biological studies 58-82-2, Bradykinin 64-17-5, Ethanol, biological studies 67-56-1, Methanol, biological studies 67-64-1, Acetone, biological studies 67-66-3, Chloroform, biological studies 67-68-5, Dimethyl sulfoxide, biological studies 71-43-2, Benzene, biological studies 75-05-8, Acetonitrile, biological studies 107-21-1, Ethylene glycol, biological studies 108-88-3, Toluene, biological studies 302-79-4, Retinoic acid 302-95-4, Sodium deoxycholate 1407-47-2, Angiotensin 9002-60-2, Adrenocorticotropic hormone, biological studies 9002-64-6, Parathyroid hormone 9002-72-6, Growth hormone 9002-79-3, Melanocyte stimulating hormone 9004-10-8, Insulin, biological studies 9007-12-9, Calcitonin 9034-39-3, Growth-hormone releasing hormone 9034-40-6, Luteinizing-hormone releasing hormone 11000-17-2, Vasopressin 25496-72-4, Monoolein 33507-63-0, Substance P 39379-15-2, Neurotensin 51110-01-1, Somatostatin 60118-07-2, Endorphin 61912-98-9, Insulin-like growth factor 62683-29-8, Colony stimulating factor 74913-18-1, Dynorphin 79217-60-0, Cyclosporin 80449-02-1, Protein kinase 85637-73-6, Atrial natriuretic peptide 86090-08-6, Angiostatin **87915-38-6**, Blue dextran 169494-85-3, Leptin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations containing monoglycerides for enhancement of drug bioavailability)

IT **183283-20-7**, DOEPC
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

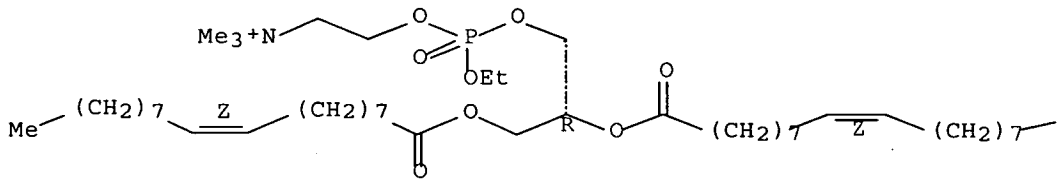
(emulsifier; formulations containing monoglycerides for enhancement of drug bioavailability)

RN 183283-20-7 HCAPLUS

CN 3,5,9-Trioxa-4-phosphaheptacos-18-en-1-aminium, 4-ethoxy-N,N,N-trimethyl-10-oxo-7-[[(9Z)-1-oxo-9-octadecen-1-yl]oxy]-, 4-oxide, (7R,18Z)- (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

Me

IT 87915-38-6, Blue dextran
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations containing monoglycerides for enhancement of drug bioavailability)

RN 87915-38-6 HCAPLUS

CN Dextran, 4-[[4-[(4-amino-9,10-dihydro-9,10-dioxo-3-sulfo-1-anthracenyl)amino]-2-sulfophenyl]amino]-6-[[3(or 4)-sulfophenyl]amino]-1,3,5-triazin-2-yl ether, trisodium salt (CA INDEX NAME)

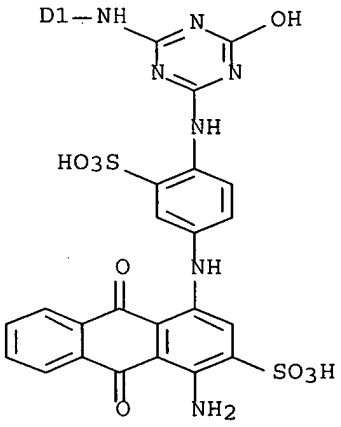
CM 1

CRN 168075-63-6
CMF C29 H21 N7 O12 S3
CCI IDS

PAGE 1-A

D1—SO3H

PAGE 2-A



CM 2

CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:172137 HCAPLUS Full-text
DOCUMENT NUMBER: 136:227885
TITLE: Use of nucleic acids sequestered in liposomes, virus-like particles, non-viable cells or polymers as internal standards in diagnostic nucleic acid amplification assays
PATENT ASSIGNEE(S): Statens Institutt for Folkehelse, Norway; Berg, Einar Sverre; Skaug, Kjell; Jones, Elizabeth Louise
SOURCE: PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018635	A2	20020307	WO 2001-GB3879	20010830
WO 2002018635	A3	20030320		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,

IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2420845	A1	20020307	CA 2001-2420845	20010830
AU 200184203	A	20020313	AU 2001-84203	20010830
EP 1320631	A2	20030625	EP 2001-963170	20010830
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004513624	T	20040513	JP 2002-522540	20010830
NZ 524881	A	20041224	NZ 2001-524881	20010830
AU 2001284203	B2	20070315	AU 2001-284203	20010830
NO 2003000917	A	20030416	NO 2003-917	20030227
IN 2003DN00451	A	20061229	IN 2003-DN451	20030326
US 2004101869	A1	20040527	US 2003-363517	20030721
PRIORITY APPLN. INFO.:			GB 2000-21303 A	20000830
			WO 2001-GB3879 W	20010830

ED Entered STN: 08 Mar 2002

AB The present invention relates to the use of non-viable particles (and in particular liposome particles, particles which are in the form of a viral protein coat, non-viable genetically modified organisms or particles made of synthetic polymers), comprising an internal control (IC) nucleic acid sequence as an internal control in nucleic acid-based anal. The present invention further relates to non-viable particles comprising an IC nucleic acid and kits for carrying out the methods and uses of the invention. The sequestered nucleic acids can then be used to monitor the recovery of nucleic acids in sample processing and therefore eliminate false-neg. results arising from sample processing. They can also be used to eliminate false-pos. results from the assay. Use of a number of different liposome compns. containing an internal standard in the diagnostic detection of Chlamydia trachomatis is demonstrated.

IC ICM C12Q001-68
ICS A61K009-127

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9

IT **2462-63-7**, DOPE 3700-67-2, DDAB **26662-91-9**, POPC **87915-38-6**, Dextran Blue 144189-73-1, DOTAP **182280-69-9**, PEG-PE
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(liposomes containing, sequestration of nucleic acid standard in; use of sequestered nucleic acids as internal stds. in diagnostic nucleic acid amplification assays)

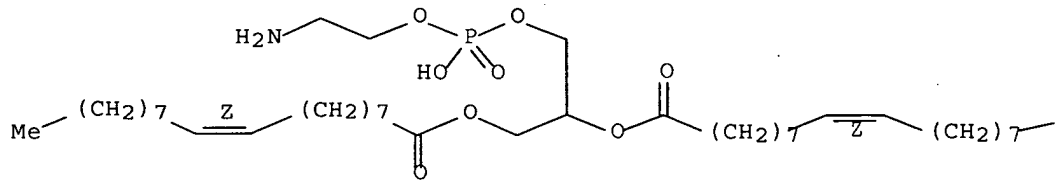
IT **2462-63-7**, DOPE **26662-91-9**, POPC **87915-38-6**, Dextran Blue **182280-69-9**, PEG-PE
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(liposomes containing, sequestration of nucleic acid standard in; use of sequestered nucleic acids as internal stds. in diagnostic nucleic acid amplification assays)

RN 2462-63-7 HCAPLUS

CN 9-Octadecenoic acid (9Z)-, 1,1'-[1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl] ester (CA INDEX NAME)

Double bond geometry as shown.

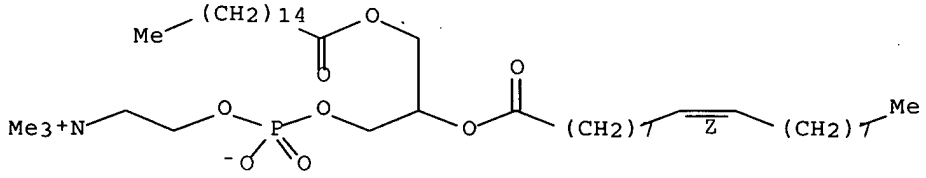
PAGE 1-A



PAGE 1-B

RN 26662-91-9 HCAPLUS
CN 3,5,8-Trioxa-4-phosphahexacos-17-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[(1-oxohexadecyl)oxy]methyl]-, inner salt, 4-oxide, (17Z)- (CA INDEX NAME)

Double bond geometry as shown.



RN 87915-38-6 HCAPLUS
CN Dextran, 4-[[4-[(4-amino-9,10-dihydro-9,10-dioxo-3-sulfo-1-anthracenyl)amino]-2-sulfophenyl]amino]-6-[[3(or 4)-sulfophenyl]amino]-1,3,5-triazin-2-yl ether, trisodium salt (CA INDEX NAME)

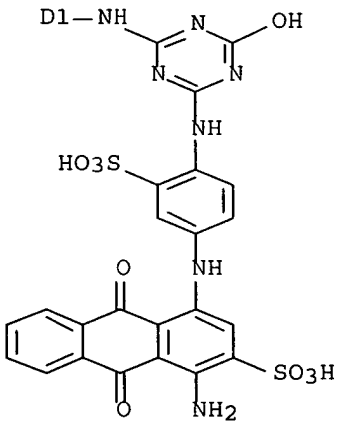
CM 1

CRN 168075-63-6
CMF C29 H21 N7 O12 S3
CCI IDS

PAGE 1-A

D1—SO_3H

PAGE 2-A



CM 2

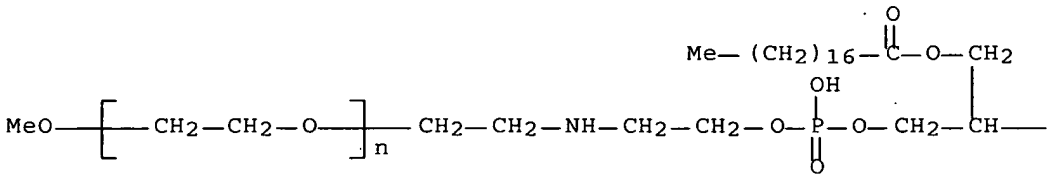
CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

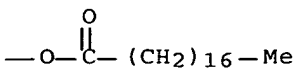
RN 182280-69-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[(10R)-7-hydroxy-7-oxido-13-oxo-10-[(1-oxooctadecyl)oxy]-6,8,12-trioxa-3-aza-7-phosphatriacont-1-yl]-ω-methoxy- (CA INDEX NAME)

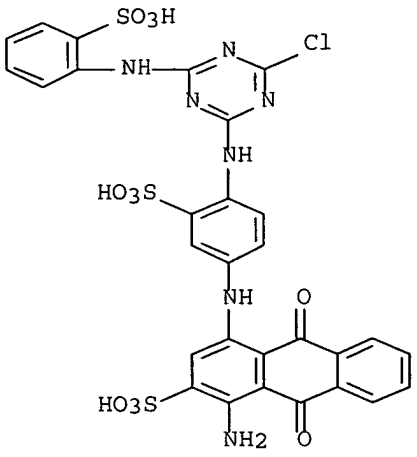
PAGE 1-A



PAGE 1-B



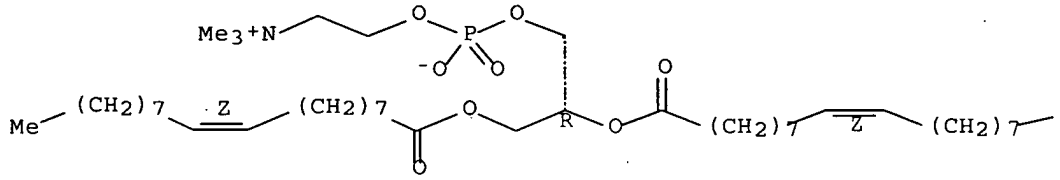
L26 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:654448 HCAPLUS Full-text
DOCUMENT NUMBER: 132:46051
TITLE: The effects of inhibitors upon pore formation by diphtheria toxin and diphtheria toxin T domain
AUTHOR(S): Sharpe, J. C.; Kachel, K.; London, E.
CORPORATE SOURCE: Department of Biochemistry and Cell Biology, SUNY at Stony Brook, NY, 11794-5215, USA
SOURCE: Journal of Membrane Biology (1999), 171(3), 223-233
CODEN: JMBBBO; ISSN: 0022-2631
PUBLISHER: Springer-Verlag New York Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 14 Oct 1999
AB The formation of pores by membrane-inserted diphtheria toxin is closely linked to the translocation of its catalytic chain across membranes. In this report a number of aromatic polyanionic mols. were identified that inhibit toxin-induced leakage of mols. from model membrane vesicles. One inhibitor, Cibacron blue, totally blocked pore formation. Aniline blue and Fast Green decreased the size of the mol. released by a given concentration of toxin. Amaranth appeared to reduce the maximal amount of leakage, without greatly affecting the size of the mol. released at a given toxin concns. Finally, Ponceau S and Cibacron brilliant red appeared to exhibit a mixture of these various types of inhibition. The inhibitors neither prevented the conformational transition of the toxin to form a hydrophobic state at low pH, nor (with the exception of Cibacron Brilliant Red) appeared to strongly inhibit toxin binding to model membranes. Addnl. expts. showed release of trapped materials from model membranes by isolated T domain of the toxin was similar to that by whole toxin. The effects of inhibitors on T domain induced release was also similar to that they have on whole toxin. Therefore, it is likely that the inhibition of pore formation by whole toxin involves inhibitor interaction with the T domain. The inhibitors identified in this study may be helpful for development of agents that interfere with toxin action in vivo.
CC 4-5 (Toxicology)
IT 915-67-3, Amaranth 2353-45-9, Fast Green FCF 6226-79-5, Ponceau S 17681-50-4, Cibacron brilliant red 3B-A 61489-48-3, Aniline blue **84166-13-2** 123333-82-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(effects of inhibitors upon pore formation by diphtheria toxin and diphtheria toxin T domain)
IT **4235-95-4**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(membrane containing; effects of inhibitors upon pore formation by diphtheria toxin and diphtheria toxin T domain)
IT **84166-13-2**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(effects of inhibitors upon pore formation by diphtheria toxin and diphtheria toxin T domain)
RN 84166-13-2 HCAPLUS
CN 2-Anthracenesulfonic acid, 1-amino-4-[[4-[[4-chloro-6-[(2-sulfophenyl)amino]-1,3,5-triazin-2-yl]amino]-3-sulfophenyl]amino]-9,10-dihydro-9,10-dioxo- (CA INDEX NAME)



IT 4235-95-4
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(membrane containing; effects of inhibitors upon pore formation by diphtheria toxin and diphtheria toxin T domain)
RN 4235-95-4 HCAPLUS
CN 3,5,9-Trioxa-4-phosphaheptacos-18-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[(9Z)-1-oxo-9-octadecen-1-yl]oxy]-, inner salt, 4-oxide, (7R,18Z)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

Me

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:458781 HCAPLUS Full-text

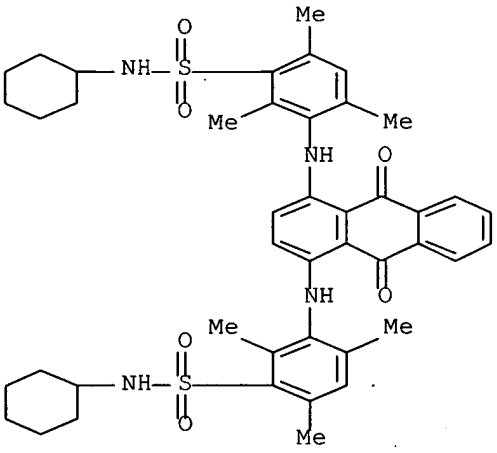
DOCUMENT NUMBER: 117:58781
TITLE: Silver halide photographic materials with suppressed sweating
INVENTOR(S): Hashimoto, Hiroyuki
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03235939	A	19911021	JP 1990-32011	19900213
PRIORITY APPLN. INFO.:			JP 1990-32011	19900213

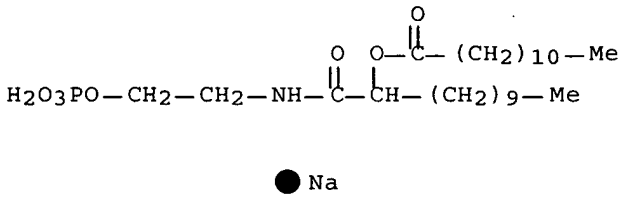
ED Entered STN: 08 Aug 1992

AB The title materials have ≥1 layers containing high-boiling solvents (b.p.≥150°) and compds. RCH(OCOR1)Z1NHZ2OP(:O)(OH)(OM) (I; R = C10-20 alkyl or alkenyl; R1 = C9-19 alkyl, alkenyl; Z1-2 = bivalent group; M = cation). This suppresses so-called sweating of photog. films by oozing out or formation of droplet of high-boiling solvents contained in the materials. Thus, a film having a backcoat containing a dispersed dye, tricresyl phosphate, and 1 of I did not show sweating when stored for 2 days at 77°, 80% relative humidity after conditioning.

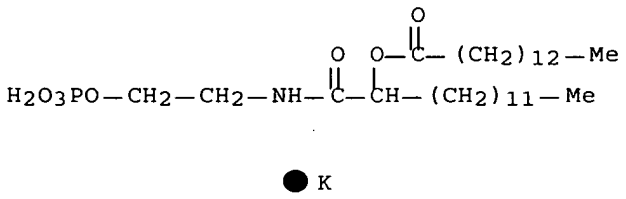
IC ICM G03C001-06
ICS G03C001-38
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 838-85-7, Diphenyl phosphate 1330-78-5, Tricresyl phosphate
23552-74-1 115344-18-8 115372-50-4 115372-57-1 139127-54-1
142465-44-9 142465-45-0 142465-46-1
142465-47-2 142465-48-3 142465-49-4
RL: USES (Uses)
(photog. film containing, for suppression of sweating)
IT **23552-74-1 142465-44-9 142465-45-0**
142465-46-1 142465-47-2 142465-48-3
142465-49-4
RL: USES (Uses)
(photog. film containing, for suppression of sweating)
RN 23552-74-1 HCAPLUS
CN Benzenesulfonamide, 3,3'-[(9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)diimino]bis[N-cyclohexyl-2,4,6-trimethyl- (CA INDEX NAME)



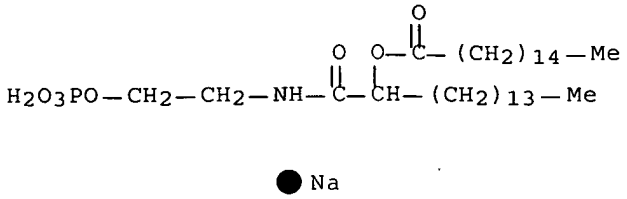
RN 142465-44-9 HCAPLUS
CN Dodecanoic acid, 1-[[[2-(phosphonooxy)ethyl]amino]carbonyl]undecyl ester, monosodium salt (9CI) (CA INDEX NAME)



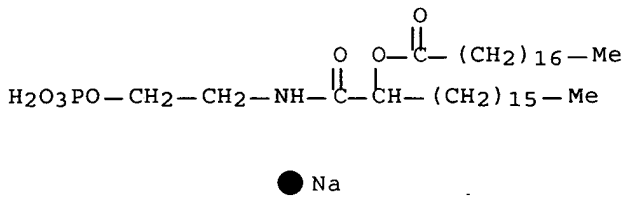
RN 142465-45-0 HCAPLUS
CN Tetradecanoic acid, 1-[[[2-(phosphonooxy)ethyl]amino]carbonyl]tridecyl ester, monopotassium salt (9CI) (CA INDEX NAME)



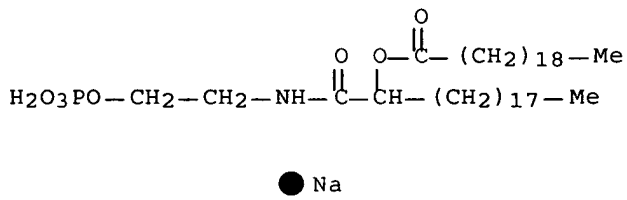
RN 142465-46-1 HCAPLUS
CN Hexadecanoic acid, 1-[[[2-(phosphonooxy)ethyl]amino]carbonyl]pentadecyl ester, monosodium salt (9CI) (CA INDEX NAME)



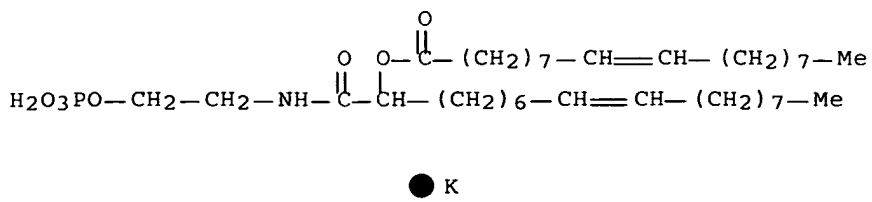
RN 142465-47-2 HCAPLUS
CN Octadecanoic acid, 1-[[[2-(phosphonooxy)ethyl]amino]carbonyl]heptadecyl ester, monosodium salt (9CI) (CA INDEX NAME)



RN 142465-48-3 HCAPLUS
CN Eicosanoic acid, 1-[[[2-(phosphonooxy)ethyl]amino]carbonyl]nonadecyl ester, monosodium salt (9CI) (CA INDEX NAME)



RN 142465-49-4 HCAPLUS
CN 9-Octadecenoic acid (9Z)-, (8Z)-1-[[[2-(phosphonooxy)ethyl]amino]carbonyl]-8-heptadecenyl ester, monopotassium salt (9CI) (CA INDEX NAME)

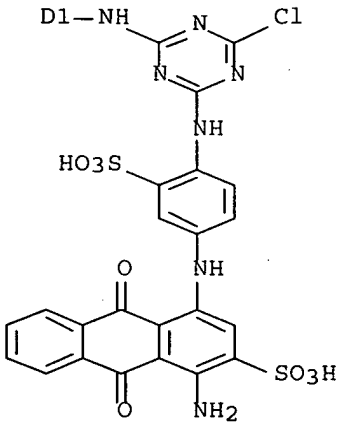


L26 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1980:176365 HCAPLUS Full-text
DOCUMENT NUMBER: 92:176365
TITLE: Interaction of phospholipase A2 from cobra venom with Cibacron Blue F3GA
AUTHOR(S): Barden, Roland E.; Darke, Paul L.; Deems, Raymond A.; Dennis, Edward A.
CORPORATE SOURCE: Dep. Chem., Univ. California, La Jolla, CA, 92093, USA
SOURCE: Biochemistry (1980), 19(8), 1621-5
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Cobra (Naja naja naja) venom phospholipase A2 reversibly binds Cibacron Blue dye with a Kd .simeq. 2 μM as measured by difference spectroscopy. NADH and NAD did not displace the dye from phospholipase A2, but the water-soluble phospholipid dihexanoylphosphatidylcholine did. The dye inhibited catalysis, and a double-reciprocal plot of inhibition as a function of dye concentration was linear and yielded a Ki .simeq. 3.5 μM. p-Bromophenacyl bromide chemical modified the active site of phospholipase A2, and the Cibacron dye inhibited this process with an apparent Kd .simeq. 7 μM. When the dye-enzyme interaction was monitored at low protein concns. (<2 μM), the difference spectral titrns., inhibition of catalysis, and prevention of chemical modification by p-bromophenacyl bromide all suggested that the dye interacts with a single type of site on the phospholipase A2. However, at higher protein concns. where cobra venom phospholipase A2 is known to exist as dimers and higher-order oligomers, the difference spectra showed the appearance of new types of binding sites. Thus, Cibacron Blue F3GA is not a reliable, specific probe for the dinucleotide fold in proteins. The dye is a useful probe for exploring the dimerization of phospholipase A2 and phospholipid binding to the enzyme.
CC 7-3 (Enzymes)
IT **12236-82-7**
RL: PROC (Process)
(phospholipase A2 binding of)
IT **53892-41-4**
RL: BIOL (Biological study)
(phospholipase A2 binding of Cibacron Blue displacement by)
IT **12236-82-7**
RL: PROC (Process)
(phospholipase A2 binding of)
RN 12236-82-7 HCAPLUS
CN 2-Anthracenesulfonic acid, 1-amino-4-[[4-[[4-chloro-6-[[3(or 4)-sulfophenyl]amino]-1,3,5-triazin-2-yl]amino]-3-sulfophenyl]amino]-9,10-dihydro-9,10-dioxo- (CA INDEX NAME)

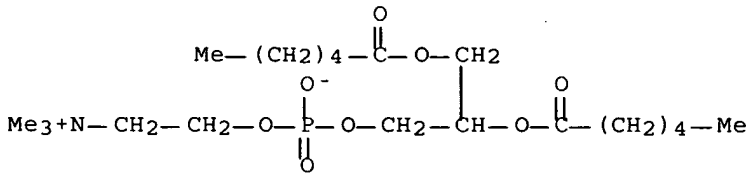
PAGE 1-A

D1—SO_3H

PAGE 2-A



IT 53892-41-4
RL: BIOL (Biological study)
(phospholipase A2 binding of Cibacron Blue displacement by)
RN 53892-41-4 HCAPLUS
CN 3,5,9-Trioxa-4-phosphapentadecan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxohexyl)oxy]-, inner salt, 4-oxide (CA INDEX NAME)



L26 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1967:422888 HCAPLUS Full-text
DOCUMENT NUMBER: 67:22888
ORIGINAL REFERENCE NO.: 67:4399a,4402a
TITLE: Fiber-reactive dyes
INVENTOR(S): Randall, David I.; Schmidt-Nickels, Wilhelm
PATENT ASSIGNEE(S): General Aniline and Film Corp.
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3294778		19661227	US 1964-396351	19611120

ED Entered STN: 12 May 1984

GI For diagram(s), see printed CA Issue.

AB The title compds. containing CH2N(CH2CH2X)2 (Q) groups are dyes for cotton. Thus, a mixture of 250 vols. EtOH, 52.4 parts NH(CH2CH2OH)2, and 23.2 parts 4,2,6-O2N(ClCH2)2C6H2Me was stirred at 60° for 0.5 hr. and at reflux for 2 hrs., 220 vols. EtOH distilled, the residue poured into 500 ml. H2O, 20% aqueous Na2CO3 added to give pH 10 and 230 parts NaCl added to precipitate 2,6,4-Q2(O2N)C6H2Me (X = OH), which (17.1 parts) in 200 vols. EtOH and 4.2 parts PtO2 was hydrogenated for 1.75 hrs. at 60 to 48 psi. to give 2,6,4-Q2(H2N)C6H2Me (I, X = OH) (II). SOCl2 (19.7 parts) was added to 18.4 parts II in 170 vols. CHCl3 under vigorous agitation and the mixture boiled under reflux for 2 hrs. to give I (X = Cl) (III) which (10 parts) was diazotized and coupled with 7.1 parts 60% 1-(4-sulfophenyl)-3-methyl-5- pyrazolone to give IV, a bright yellow dye. Similarly, other dyes were prepared (reactants and shade given): diazotized III, 1,8,3,6- AcNH(HO)C10H4(SO3H)2, pink; V (X = OSO3H, Y = Me) (VI), 1-amino-4-bromo-2-anthraquinonesulfonic acid, blue; diazotized 4-H2NC6H4SO3H, 3,2-HOC10H6CONHC6H2(OMe)Q2-4,3,5 (X = Br), red; 1,4-bis-(3-chloromethyl-p-toluidino)anthraquinone, 2 moles V (X = OPO3H2, Y = H), olive green; 2-ClC6H4NO2, V (X = 3-HO3SC6H4SO3, Y = Me), yellow; perylenetetracarboxylic acid dianhydride, 2 moles VI, red; VII, VI, navy blue; 4-nitronaphthalic anhydride, VI (reduce NO2), fluorescent yellow.

INCL 260163000

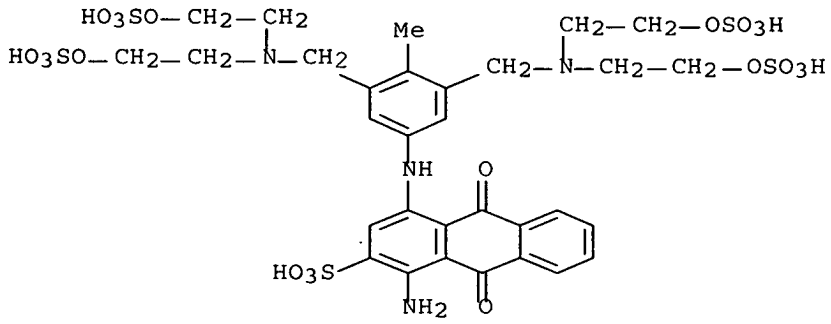
CC 40 (Dyes, Fluorescent Brightening Agents, and Photosensitizers)

IT 10283-12-2P 14554-29-1P 14554-34-8P 14554-35-9P 14554-36-0P
14554-37-1P 14557-59-6P 14652-03-0P 14658-63-0P
14712-63-1P 28983-83-7P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

IT **14554-37-1P 14557-59-6P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

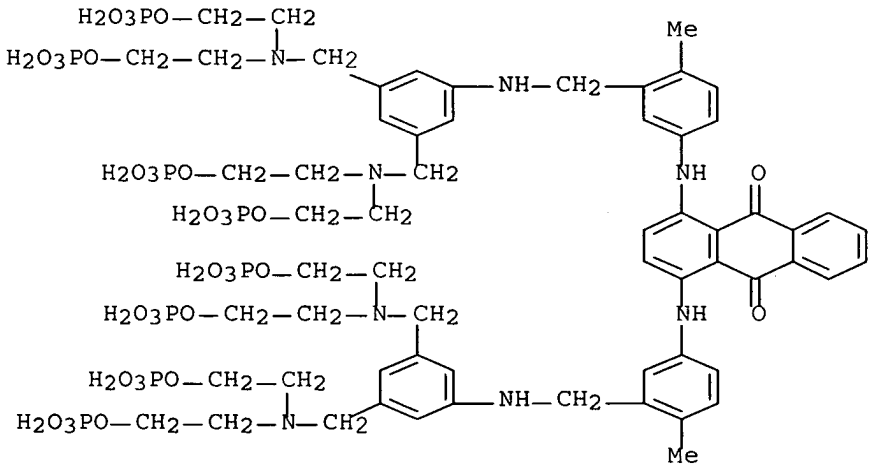
RN 14554-37-1 HCAPLUS

CN 2-Anthracenesulfonic acid, 1-amino-4-[3,5-bis[[bis(2-hydroxyethyl)amino]methyl]-4-methylanilino]-9,10-dihydro-9,10-dioxo-, tetrakis(hydrogen sulfate) (ester) (8CI) (CA INDEX NAME)



RN 14557-59-6 HCAPLUS

CN Anthraquinone, 1,4-bis[α3-[α,α'-bis[bis(2-hydroxyethyl)amino]-3,5-xylidino]-3,4-xylidino]-, octakis(dihydrogen phosphate) (ester) (8CI) (CA INDEX NAME)



***** INVENTOR RESULTS *****

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L34            2 S L33 AND L19

=> d que l34
L7                STR
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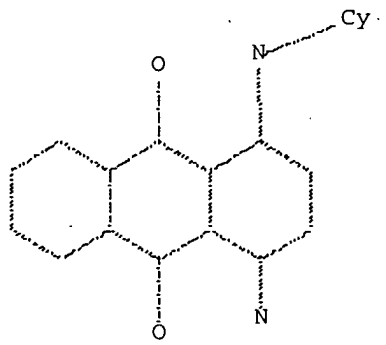

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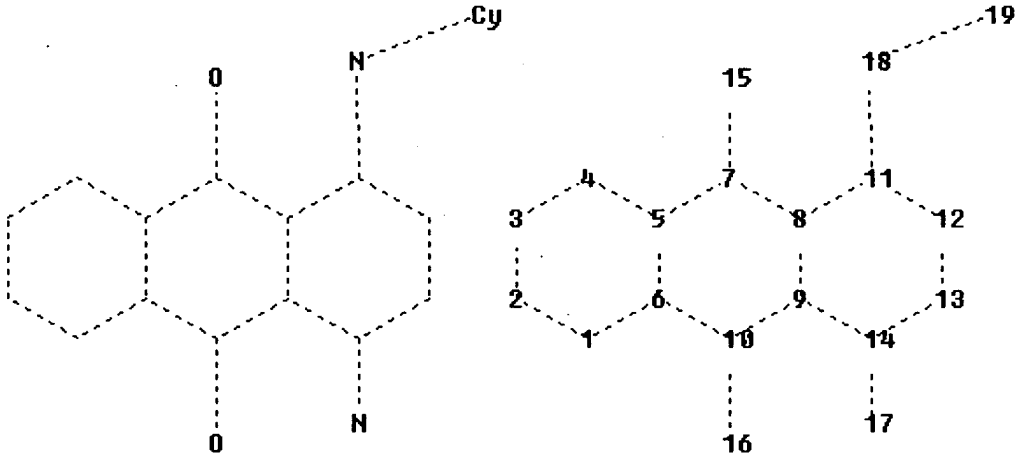


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ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14
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ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-10  7-8  8-9  8-11  9-10  9-14  11-12  12-13
13-14
exact/norm bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-10  7-8  7-15  8-9  8-11  9-10  9-14  10-16
11-12  11-18  12-13  13-14  14-17  18-19
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L31          25 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("ROSE SCOTT"/AU OR "ROSE
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=> d l34 1-2 ibib ed abs hitind hitstr


L34  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2006:1228605  HCAPLUS  Full-text
DOCUMENT NUMBER:          146:1575
TITLE:                    Azo compounds, oligonucleotides labeled by oxime
                          formation, and their use in hybridization analysis
INVENTOR(S):              Laikhter, Andrei; Walder, Joseph A.;
                          Behlke, Mark; Podyminogin, Mikhail
PATENT ASSIGNEE(S):       Integrated Dna Technologies, Inc., USA
SOURCE:                   U.S. Pat. Appl. Publ., 39pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     US 2006263816         A1    20061123    US 2006-438606          20060522
     AU 2006251637         A1    20061130    AU 2006-251637          20060522
     WO 2006127507         A2    20061130    WO 2006-US19552         20060522
     WO 2006127507         A3    20070405
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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             KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
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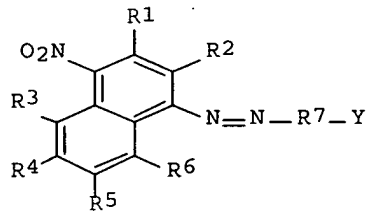
PRIORITY APPLN. INFO.: US 2005-683278P P 20050520
WO 2006-US19552 W 20060522

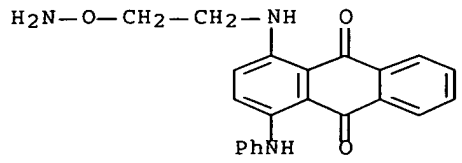
OTHER SOURCE(S): MARPAT 146:1575
ED Entered STN: 24 Nov 2006
GI



I

AB The invention provides a novel method of labeling oligonucleotides, with reporter moieties, including but not limited to, quenchers, fluorophores, biotin, digoxigenin, peptides and proteins. In addition, this invention provides a method of detecting hybridization of oligonucleotides. This invention also provides novel azo quenchers I (R1-6 = electron-withdrawing group, alkyl, aryl, heteroaryl, H, 5- or 6-membered ring from from R1 and R2, R3 and R4, R4 and R5, or R5 and R6; R7 = (substituted)aryl; Y = oxime-forming nucleophile). The invention further provides compns. comprising labeled oligonucleotides and solid supports. The invention also provides kits comprising at least one composition of the present invention. Thus, a (1-nitro-4-naphthylazo)-N-Et-N-(2- aminooxyethyl)aniline quencher was synthesized and conjugated to a fluorescein-labeled probe for use in quant. real-time PCR. This compound quenched fluorescein with similar efficiency as Eclipse quencher.

INCL 435006000; 534727000; 536025320; 530409000; 530391100
CC 3-1 (Biochemical Genetics)
IT 914981-53-6 914981-54-7 **914981-55-8** 914981-56-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(azo compds., oligonucleotides labeled by oxime formation, and their use in hybridization anal.)
IT **914981-55-8**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(azo compds., oligonucleotides labeled by oxime formation, and their use in hybridization anal.)
RN 914981-55-8 HCAPLUS
CN 9,10-Anthracenedione, 1-[[2-(aminooxy)ethyl]amino]-4-(phenylamino)- (CA INDEX NAME)



L34 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:267280 HCAPLUS Full-text
DOCUMENT NUMBER: 140:288820
TITLE: Anthraquinone quencher dyes, their production and their use
INVENTOR(S): **Behlke, Mark Aaron; Laikhter, Andrei ; Huang, Lingyan; Rose, Scott; Yong, Yawfui**
PATENT ASSIGNEE(S): Integrated DNA Technologies, Inc., USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004026804	A1	20040401	WO 2003-US29324	20030919
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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AU 2003275018	A1	20040408	AU 2003-275018	20030919
US 2004110308	A1	20040610	US 2003-666998	20030919
EP 1556325	A1	20050727	EP 2003-759288	20030919
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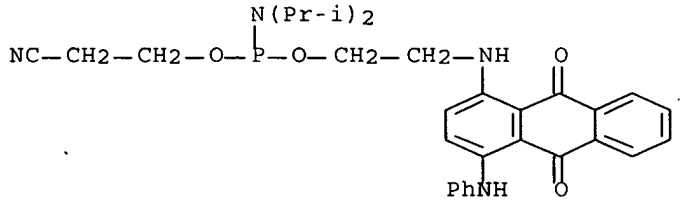
JP 2006500408	T	20060105	JP 2004-537958	20030919
PRIORITY APPLN. INFO.:			US 2002-412215P P	20020920
			WO 2003-US29324 W	20030919

OTHER SOURCE(S): MARPAT 140:288820
ED Entered STN: 01 Apr 2004
AB The invention provides novel anthraquinone compns. that are useful as broad-spectrum quenchers of fluorescence and provides methods for making and using them. The anthraquinone quenchers can be conjugated to a variety of biol. relevant compds., including lipids, nucleic acids, polypeptides, and more specifically antigens, steroids, vitamins, drugs, haptens, metabolites, toxins, environmental pollutants, amino acids, peptides, proteins, nucleotides, oligonucleotides, polynucleotides, carbohydrates, and their analogs. In an example, 2-cyanoethyl N,N-diisopropylphosphonamidic chloride was condensed with 1-(methylamino)-4-(2-hydroxyethylmino)anthraquinone to give a dye.
IC ICM C07C050-18
CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 9, 25
IT **546103-05-3P 676225-09-5P 676225-11-9P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; production of anthraquinone quencher dyes for biochem. application)
IT **2944-12-9P 42985-05-7P 47772-30-5P**

107035-84-7P 676225-10-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; production of anthraquinone quencher dyes for biochem. application)

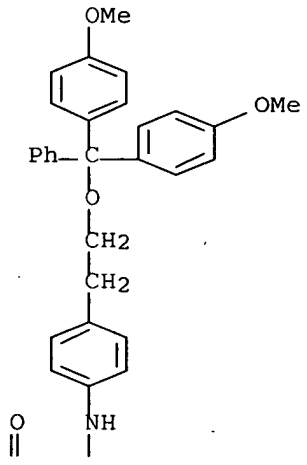
IT **676225-09-5P 676225-11-9P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; production of anthraquinone quencher dyes for biochem. application)

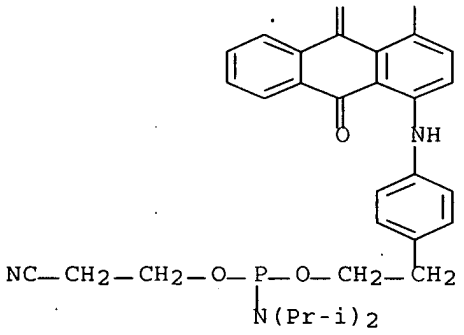
RN 676225-09-5 HCAPLUS
CN Phosphoramidous acid, bis(1-methylethyl)-, 2-cyanoethyl 2-[[9,10-dihydro-9,10-dioxo-4-(phenylamino)-1-anthracenyl]amino]ethyl ester (9CI) (CA INDEX NAME)



RN 676225-11-9 HCAPLUS
CN Phosphoramidous acid, bis(1-methylethyl)-, 2-[4-[[4-[[4-[2-[bis(4-methoxyphenyl)phenylmethoxy]ethyl]phenyl]amino]-9,10-dihydro-9,10-dioxo-1-anthracenyl]amino]phenyl]ethyl 2-cyanoethyl ester (9CI) (CA INDEX NAME)

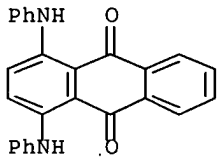
PAGE 1-A



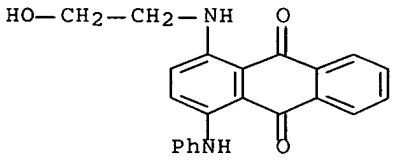


IT **2944-12-9P 42985-05-7P 47772-30-5P**
676225-10-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; production of anthraquinone quencher dyes for biochem. application)

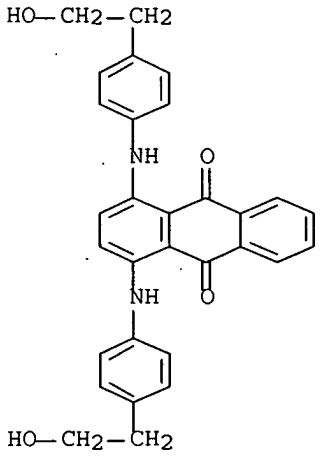
RN 2944-12-9 HCAPLUS
CN 9,10-Anthracenedione, 1,4-bis(phenylamino)- (CA INDEX NAME)



RN 42985-05-7 HCAPLUS
CN 9,10-Anthracenedione, 1-[(2-hydroxyethyl)amino]-4-(phenylamino)- (9CI) (CA INDEX NAME)

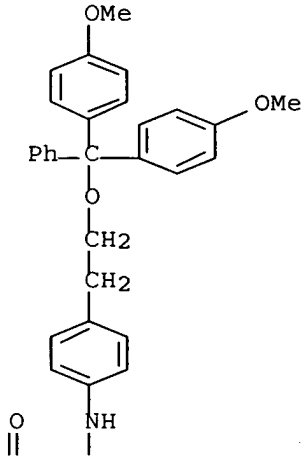


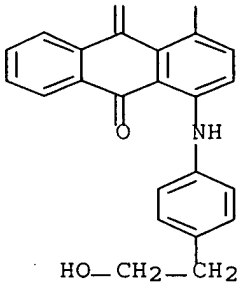
RN 47772-30-5 HCAPLUS
CN 9,10-Anthracenedione, 1,4-bis[[4-(2-hydroxyethyl)phenyl]amino]- (9CI) (CA INDEX NAME)



RN 676225-10-8 HCAPLUS
CN 9,10-Anthracenedione, 1-[[4-[2-[bis(4-methoxyphenyl)phenylmethoxy]ethyl]phenyl]amino]-4-[[4-(2-hydroxyethyl)phenyl]amino]- (CA INDEX NAME)

PAGE 1-A





REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L7              STR
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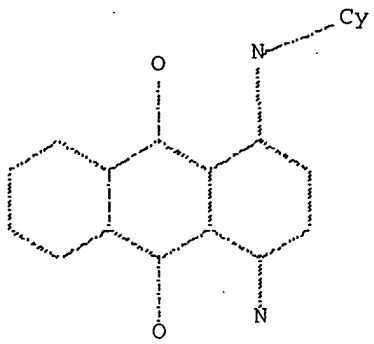

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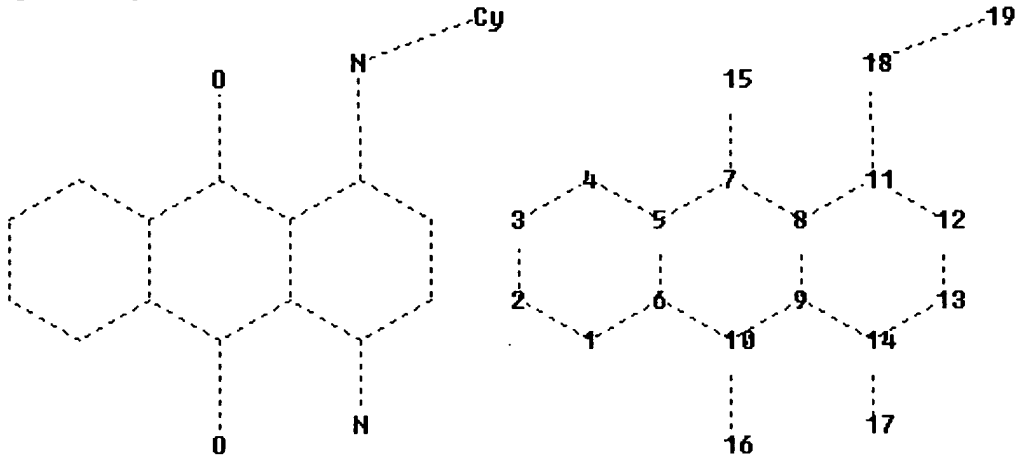
Uploading L3.str

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ring nodes :
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chain bonds :
7-15  10-16  11-18  14-17  18-19
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-10  7-8  8-9  8-11  9-10  9-14  11-12  12-13
13-14
exact/norm bonds :
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                OR L32))
L36          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L29 AND ((L30 OR L31 OR L32))

L37           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (L31 OR L32)
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L40          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L39 NOT (L1 OR L19)


=> d l40 1-11 ibib ab


L40  ANSWER 1 OF 11  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2007:1064313  HCAPLUS  Full-text
DOCUMENT NUMBER:          147:379397
TITLE:                    Nucleoside analogs with 2'-chemical moieties for
                          incorporation of blocking groups or dyes into
                          oligonucleotides
INVENTOR(S):              Laikhter, Andrei; Walder, Joseph A.;
                          Behlke, Mark A.
PATENT ASSIGNEE(S):       Integrated Dna Technologies, Inc., USA
SOURCE:                   PCT Int. Appl., 47pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     WO 2007106907         A2    20070920    WO 2007-US64110         20070315
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN,
             KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN,
             MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
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RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM

US 2007218490 A1 20070920 US 2007-686894 20070315
PRIORITY APPLN. INFO.: US 2006-782582P P 20060315

AB The invention provides nucleic acid monomers with a 2 '-modification that are useful for the incorporation of dyes or blocking groups. The monomers can be incorporated on the 3'-end of a dual labeled probe to inhibit PCR polymerase extension during PCR. The polymerase is inhibited from extending the probe at the 3 '-hydroxyl group when the monomer is present; there is no need to add a chemical moiety to the 3'-hydroxyl or remove the 3'-hydroxyl. The monomers can also be incorporated internally or at the 5 '-end of the oligonucleotide. A detectable label, such as a fluorescent or quenching dye, can be incorporated on the 2'-position of such monomers.

L40 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:847421 HCAPLUS Full-text
DOCUMENT NUMBER: 145:411344
TITLE: Optimizing knockdown of gene expression using the TriFECTa Dicer-substrate RNAi reagent system
AUTHOR(S): **Rose, Scott D.**; Collingwood, Michael A.; **Behlke, Mark A.**
CORPORATE SOURCE: Integrated DNA Technologies, Inc., Coralville, IA, 52241, USA
SOURCE: Nature Methods (2006), 3(9), v-vii
CODEN: NMAEA3; ISSN: 1548-7091
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Integrated DNA Technologies, Inc. (IDT) has developed a library of predesigned Dicer-substrate RNA duplexes. These potent RNA interference (RNAi) reagents are available in a kit (TriFECTa) that includes three specific RNA duplexes for target-gene knockdown plus three optimized control duplexes, which can be used to optimize transfection efficiency and other aspects of RNAi expts.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:307674 HCAPLUS Full-text
DOCUMENT NUMBER: 145:433508
TITLE: Characterization of Modified Antisense Oligonucleotides in Xenopus laevis Embryos
AUTHOR(S): Lennox, Kim A.; Sabel, Jaime L.; Johnson, Maegan J.; Moreira, Bernardo G.; Fletcher, Cherisa A.; **Rose, Scott D.**; **Behlke, Mark A.**; **Laikhter, Andrei L.**; Walder, Joseph A.; Dagle, John M.
CORPORATE SOURCE: Integrated DNA Technologies, Coralville, IA, 52241, USA
SOURCE: Oligonucleotides (2006), 16(1), 26-42
CODEN: OLIGAJ; ISSN: 1545-4576
PUBLISHER: Mary Ann Liebert, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A wide variety of modified oligonucleotides have been tested as antisense agents. Each chemical modification produces a distinct profile of potency, toxicity, and specificity. Novel cationic phosphoramidate- modified antisense oligonucleotides have been developed recently that have unique and interesting properties. We compared the relative potency and specificity of a variety of established antisense oligonucleotides, including phosphorothioates (PS), 2'-O-Me (2'OMe) RNAs, locked nucleic acids (LNAs), and neutral methoxyethyl (MEA) phosphoramidates with new cationic N,N-dimethylethylenediamine (DMED) phosphoramidate-modified antisense oligonucleotides. A series of oligonucleotides was synthesized that targeted two sites in the Xenopus laevis survivin gene and were introduced into Xenopus embryos by microinjection. Effects on survivin gene expression were examined using quant. real-time PCR. Of the various modified oligonucleotide designs tested, LNA/PS chimeras (which showed the highest melting temperature) and DMED/phosphodiester chimeras (which showed protection of neighboring phosphate bonds) were potent in reducing gene expression. At 40 nM, overall specificity was superior for the LNA/PS-modified compds. compared with the DMED-modified oligonucleotides. However, at 400 nM, both of these compds. led to significant degradation of survivin mRNA, even when up to three mismatches were present in the heteroduplex.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:195111 HCAPLUS Full-text
DOCUMENT NUMBER: 144:286827
TITLE: Enhancing RNAi with synthetic RNA duplexes
AUTHOR(S): Kim, Dong-Ho; **Behlke, Mark A.**; **Rose, Scott D.**; Chang, Mi-Sook; Choi, Sangdun; Rossi, John J.
CORPORATE SOURCE: Division of Molecular Biology, Beckman Research Institute of the City of Hope, Duark, CA, 91010, USA
SOURCE: Non-Viral Gene Therapy (2005), 465-475. Editor(s): Taira, Kazunari; Kataoka, Kazunori; Niidome, Takuro. Springer Tokyo: Tokyo, Japan.
CODEN: 69HWF7; ISBN: 4-431-25122-7
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A review. RNA interference (RNAi) is an evolutionarily conserved process by which specific mRNAs are targeted for degradation by complementary small interfering RNAs (siRNAs). Long double-stranded (ds) RNAs are degraded by the RNase III class endonuclease Dicer into 21- to 23-nt duplexes that have 2-base 3'-overhangs. The primary role of Dicer in RNAi is the endonucleolytic processing of long dsRNAs into short 21- to 23-mer effector mols. (siRNAs). The silencing properties of chemical synthesized duplex RNAs of different lengths and designs were studied. Duplex RNA oligonucleotides ranging from 21 to 27 base pairs incubated with recombinant human Dicer resulted in cleavage of the 23-, 25-, and 27-mer duplexes but not the 21-mer duplex. The 27-mer dsRNA design has shown increased RNAi potency relative to 21+2 (2-base 3'-overhang) siRNAs. Even in the absence of fully optimized design rules, use of the Dicer-substrate dsRNA approach can increase RNAi potency relative to traditional 21+2 siRNAs. Furthermore, the use of 27-mer dsRNAs allows targeting of some sites within a given sequence that are refractory to suppression with traditional 21-mer siRNAs. Use of Dicer-substrate dsRNAs to trigger RNAi should result in enhanced efficacy and longer duration of RNAi at lower concns. of RNA than are required for 21+2 applications.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:977446 HCAPLUS Full-text
DOCUMENT NUMBER: 143:434311
TITLE: Functional polarity is introduced by Dicer processing of short substrate RNAs
AUTHOR(S): **Rose, Scott D.**; Kim, Dong-Ho; Amarzguioui, Mohammed; Heidel, Jeremy D.; Collingwood, Michael A.; Davis, Mark E.; Rossi, John J.; **Behlke, Mark A.**
CORPORATE SOURCE: Integrated DNA Technologies, Inc., Coralville, IA, 52241, USA
SOURCE: Nucleic Acids Research (2005), 33(13), 4140-4156
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Synthetic RNA duplexes that are substrates for Dicer are potent triggers of RNA interference (RNAi). Blunt 27mer duplexes can be up to 100-fold more potent than traditional 21mer duplexes (1). Not all 27mer duplexes show increased potency. Evaluation of the products of in vitro dicing reactions using electrospray ionization mass spectrometry reveals that a variety of products can be produced by Dicer cleavage. Use of asym. duplexes having a single 2-base 3'-overhang restricts the heterogeneity that results from dicing. Inclusion of DNA residues at the ends of blunt duplexes also limits heterogeneity. Combination of asym. 2-base 3'-overhang with 3'-DNA residues on the blunt end result in a duplex form which directs dicing to predictably yield a single primary cleavage product. It is therefore possible to design a 27mer duplex which is processed by Dicer to yield a specific, desired 21mer species. Using this strategy, two different 27mers can be designed that result in the same 21mer after dicing, one where the 3'-overhang resides on the antisense (AS) strand and dicing proceeds to the 'right' ('R') and one where the 3'-overhang resides on the sense (S) strand and dicing proceeds to the 'left' ('L'). Interestingly, the 'R' version of the asym. 27mer is generally more potent in reducing target gene levels than the 'L' version 27mer. Strand targeting expts. show asym. strand utilization between the two different 27mer forms, with the 'R' form favoring S strand and the 'L' form favoring AS strand silencing. Thus, Dicer processing confers functional polarity within the RNAi pathway.

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:450828 HCAPLUS Full-text
DOCUMENT NUMBER: 143:7510
TITLE: Fluorescence quenching azo dyes, their methods of preparation and use
INVENTOR(S): **Laikhter, Andrei**; **Behlke, Mark Aaron**; Walder, Joseph; Roberts, Kevin William; **Yong, Yawfui**
PATENT ASSIGNEE(S): Integrated DNA Technologies, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005112673	A1	20050526	US 2004-987608	20041112
WO 2005049849	A2	20050602	WO 2004-US37932	20041112

WO 2005049849 A3 20060921
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2003-520077P P 20031114
OTHER SOURCE(S): MARPAT 143:7510

AB The invention provides a novel group of azo quencher compns. that are useful as quenchers of fluorescence and to methods for making and using them. The quenchers of this invention are termed dark quenchers because they release the energy they absorb from fluorophores without giving off light. The quenchers contain an azo bond and have the general formula shown below in Formula (I). In Formula I, R1-6 can individually be electron withdrawing groups such as halogen, NO2, SO3R, SO2N(R)2, CN, CNS, keto, alkoxy groups, or C1-C10alkyl groups, aryl groups, or heteroaryl groups. In addition, the R1/R2 pair, R3/R4 pair, R4/R5 pair and R5/R6 pairs can be combined to form ring structures having five or six ring members. These ring structures can be substituted. R7 can be any aryl group that can be joined to the conjugated ring system by an azo bond to form a compound that is capable of quenching the fluorescence of a fluorophore. The quenchers can be derivatized to facilitate their conjugation to a variety of biol. relevant compds., including lipids, nucleic acids, peptides, proteins, and the like. The invention also provides kits comprising, in one or more containers, at least one quencher dye composition of the present invention, and instructions for using that composition

L40 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:105490 HCAPLUS Full-text
DOCUMENT NUMBER: 142:369420
TITLE: Synthetic dsRNA Dicer substrates enhance RNAi potency and efficacy
AUTHOR(S): Kim, Dong-Ho; **Behlke, Mark A.**; **Rose, Scott D.**; Chang, Mi-Sook; Choi, Sangdun; Rossi, John J.
CORPORATE SOURCE: Division of Molecular Biology, Beckman Research Institute of the City of Hope, Duarte, CA, 91010, USA
SOURCE: Nature Biotechnology (2005), 23(2), 222-226
CODEN: NABIF9; ISSN: 1087-0156
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

AB RNA interference (RNAi) is the process of sequence-specific post-transcriptional gene silencing triggered by double-stranded RNAs. In attempts to identify RNAi triggers that effectively function at lower concns., we found that synthetic RNA duplexes 25-30 nucleotides in length can be up to 100-fold more potent than corresponding conventional 21-mer small interfering RNAs (siRNAs). Some sites that are refractory to silencing by 21-mer siRNAs can be effectively targeted by 27-mer duplexes, with silencing lasting up to 10 d. Notably, the 27-mers do not induce interferon or activate protein kinase R (PKR). The enhanced potency of the longer duplexes is attributed to the fact that they are substrates of the Dicer endonuclease, directly linking the production of siRNAs to incorporation in the RNA-induced silencing complex. These results provide an alternative strategy for eliciting RNAi-mediated

target cleavage using low concns. of synthetic RNA as substrates for cellular Dicer-mediated cleavage.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:570467 HCAPLUS Full-text
DOCUMENT NUMBER: 141:119302
TITLE: Visual detection assays for RNase using nucleic acid substrates with RNase-cleavable domain flanked by a fluorescence reporter group and a dark fluorescence quencher
INVENTOR(S): Walder, Joseph Alan; **Behlke, Mark Aaron**; Devor, Eric Jeffrey; **Huang, Lingyan**
PATENT ASSIGNEE(S): Integrated DNA Technologies, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 38 pp., Division of U.S. Ser. No. 968,733.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004137479	A1	20040715	US 2003-694480		20031027
US 7276337	B2	20071002			
US 6773885	B1	20040810	US 2001-968733		20011001
PRIORITY APPLN. INFO.:			US 2000-236640P	P	20000929
			US 2001-968733	A3	20011001

AB The present invention relates to methods for detecting the presence of RNase enzymes, more specifically to methods that provide for a visual detection assay. The methods entail contacting a test sample suspected of containing RNase activity with a substrate containing a RNase-sensitive internucleotide linkage flanked directly or indirectly by a fluorescence reporter group and a dark quencher, such that if a RNase activity is present in the sample, the RNase-sensitive internucleotide linkage is cleaved and the fluorescence reporter group emits a visually detectable signal. The present invention further provides novel nucleic acid compns. used as substrates for such assays and encompasses kits for performing the methods of the invention. The most preferred composition for a single substrate is 5'-FAM-AauggcA-QSY-7-3', where FAM is 6-carboxy-fluorescein and QSY-7 is a diarylrhodamine deriv from Mol. Probes, A is 2'-O-methyladenosine, and 'a', 'c', 'u', and 'g', are the ribonucleotide bases adenosine, cytosine, uridine, and guanosine. The assay is highly sensitive, highly specific, capable of detecting a broad spectrum of RNase enzymes, employs reagents that can be manufactured using com. reagents, is rapid and easy to perform, does not use any hazardous reagents, and can be performed without any specialized equipment. The visual assay is sensitive to 10 pg/mL RNase A, a level that is suitable for use as a quality control assay and comparable to the sensitivity of existing com. assays which require use of a fluorometer for detection.

L40 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:252735 HCAPLUS Full-text
DOCUMENT NUMBER: 140:265605
TITLE: Methods for estimating the melting temperature (Tm) of primers or probes for use in PCR
INVENTOR(S): Owczarzy, Richard; Walder, Joseph Alan; **Huang, Lingyan**; **Behlke, Mark Aaron**

PATENT ASSIGNEE(S): Integrated DNA Technologies, Inc., USA
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004025257	A2	20040325	WO 2003-US28664	20030912
WO 2004025257	A3	20040812		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004115705	A1	20040617	US 2003-660253	20030911
US 6889143	B2	20050503		
CA 2498414	A1	20040325	CA 2003-2498414	20030912
AU 2003272340	A1	20040430	AU 2003-272340	20030912
EP 1543438	A2	20050622	EP 2003-754518	20030912
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006502711	T	20060126	JP 2004-536191	20030912

PRIORITY APPLN. INFO.: US 2002-410663P P 20020912
WO 2003-US28664 W 20030912

AB The invention relates to methods and systems for predicting or estimating the melting temperature of duplex nucleic acids, particularly duplexes of oligonucleotides which may be used, for example, as primers or probes in PCR and/or hybridization assays. The invention also relates to methods and systems for designing and selecting oligonucleotide probes and primers having a predicted melting temperature which is optimized for such assays. To this end, algorithms and methods are provided for predicting the melting temperature of a nucleic acid having a predetd. sequence. These methods and algorithms estimate the melting temperature of a nucleic acid duplex under particular salt conditions. The methods and algorithms use novel formulas, having terms and coeffs. that are functions of the particular nucleotide sequence, to estimate the effect of particular salt conditions on the melting temperature As such, the methods and systems of the invention provide superior result compared to existing methods, which do not consider sequence dependent effects of changing salt conditions.

L40 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:178950 HCAPLUS Full-text
DOCUMENT NUMBER: 140:370338
TITLE: Effects of Sodium Ions on DNA Duplex Oligomers: Improved Predictions of Melting Temperatures
AUTHOR(S): Owczarzy, Richard; You, Yong; Moreira, Bernardo G.; Manthey, Jeffrey A.; **Huang, Lingyan**; **Behlke, Mark A.**; Walder, Joseph A.
CORPORATE SOURCE: Integrated DNA Technologies, Coralville, IA, 52241, USA
SOURCE: Biochemistry (2004), 43(12), 3537-3554

CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Melting temps., Tm, were systematically studied for a set of 92 DNA duplex oligomers in a variety of sodium ion concns. ranging from 69 mM to 1.02 M. The relationship between Tm and ln [Na+] was nonlinear over this range of sodium ion concns., and the observed melting temps. were poorly predicted by existing algorithms. A new empirical relationship was derived from UV melting data that employs a quadratic function, which better models the melting temps. of DNA duplex oligomers as sodium ion concentration is varied. Statistical anal. shows that this improved salt correction is significantly more accurate than previously suggested algorithms and predicts salt-corrected melting temps. with an average error of only 1.6° when tested against an independent validation set of Tm measurements obtained from the literature. Differential scanning calorimetry studies demonstrate that this Tm salt correction is insensitive to DNA concentration The Tm salt correction function was found to be sequence-dependent and varied with the fraction of G·C base pairs, in agreement with previous studies of genomic and polymeric DNAs. The salt correction function is independent of oligomer length, suggesting that end-fraying and other end effects have little influence on the amount of sodium counterions released during duplex melting. The results are discussed in the context of counterion condensation theory.

REFERENCE COUNT: 95 THERE ARE 95 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:228640 HCAPLUS Full-text
DOCUMENT NUMBER: 139:113216
TITLE: Hybridization kinetics and thermodynamics of molecular beacons
AUTHOR(S): Tsourkas, Andrew; **Behlke, Mark A.**; **Rose, Scott D.**; Bao, Gang
CORPORATE SOURCE: Department of Biomedical Engineering, Georgia Institute of Technology and Emory University, Atlanta, GA, 30332, USA
SOURCE: Nucleic Acids Research (2003), 31(4), 1319-1330
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Mol. beacons are increasingly being used in many applications involving nucleic acid detection and quantification. The stem-loop structure of mol. beacons provides a competing reaction for probe-target hybridization that serves to increase probe specificity, which is particularly useful when single-base discrimination is desired. To fully realize the potential of mol. beacons, it is necessary to optimize their structure. Here we report a systematic study of the thermodn. and kinetic parameters that describe the mol. beacon structure-function relationship. Both probe and stem lengths are shown to have a significant impact on the binding specificity and hybridization kinetic rates of mol. beacons. Specifically, mol. beacons with longer stem lengths have an improved ability to discriminate between targets over a broader range of temps. However, this is accompanied by a decrease in the rate of mol. beacon-target hybridization. Mol. beacons with longer probe lengths tend to have lower dissociation consts., increased kinetic rate consts., and decreased specificity. Mol. beacons with very short stems have a lower signal-to-background ratio than mol. beacons with longer stems. These features have significant implications for the design of mol. beacons for various applications.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L11            0 SEA SUB=L8 SSS SAM L9

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L18           57 SEA SUB=L12 SSS FUL L17

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                 D IBIB HITSTR

     FILE 'REGISTRY' ENTERED AT 16:28:41 ON 31 OCT 2007
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L27           0 SEA ABB=ON  PLU=ON  L26 AND L1
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L31          25 SEA ABB=ON  PLU=ON  ("ROSE SCOTT"/AU OR "ROSE SCOTT D"/AU OR
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L33         100 SEA ABB=ON  PLU=ON  L28 OR L29 OR L30 OR L31 OR L32
L34           2 SEA ABB=ON  PLU=ON  L33 AND L19
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L35           5 SEA ABB=ON  PLU=ON  L28 AND ((L29 OR L30 OR L31 OR L32))
L36          11 SEA ABB=ON  PLU=ON  L29 AND ((L30 OR L31 OR L32))
L37           1 SEA ABB=ON  PLU=ON  L30 AND (L31 OR L32)
L38           1 SEA ABB=ON  PLU=ON  L31 AND L32
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                D L34 1-2 IBIB ED ABS HITIND HITSTR

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